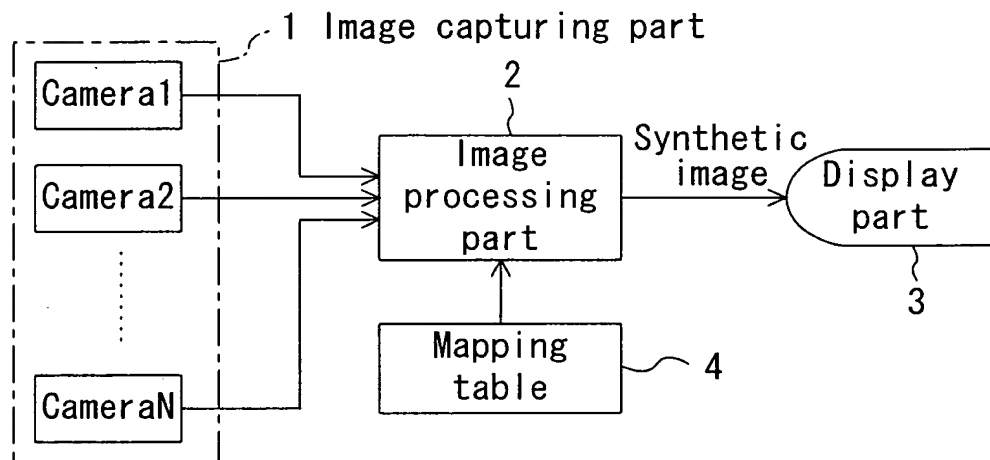


1/47

FIG. 1



2/47

FIG. 2A

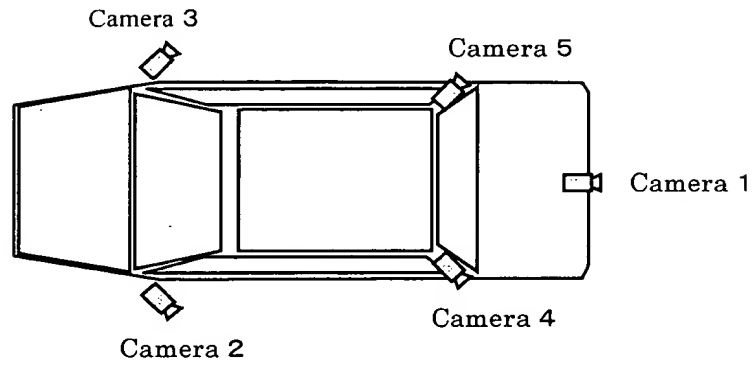
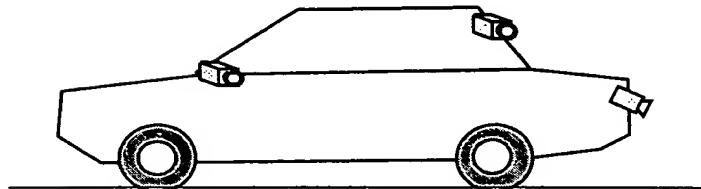


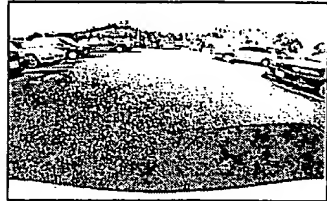
FIG. 2B



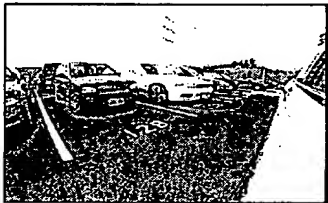
3/47

FIG. 3

Camera 1



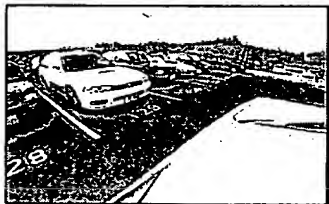
Camera 3



Camera 2



Camera 5



Camera4

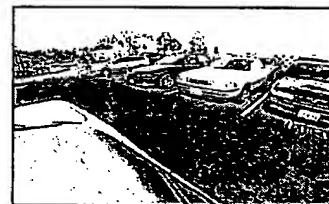
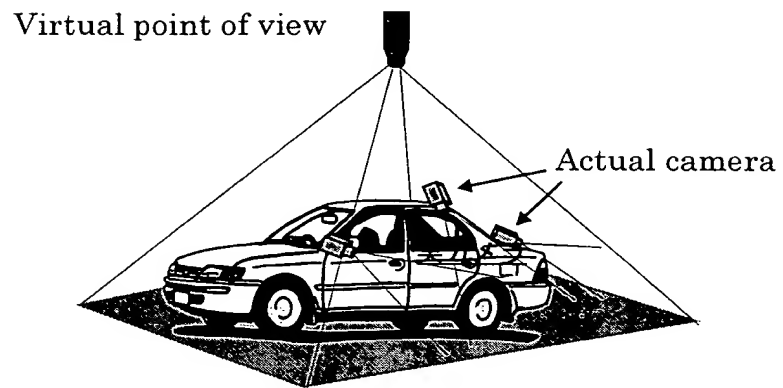


FIG. 3

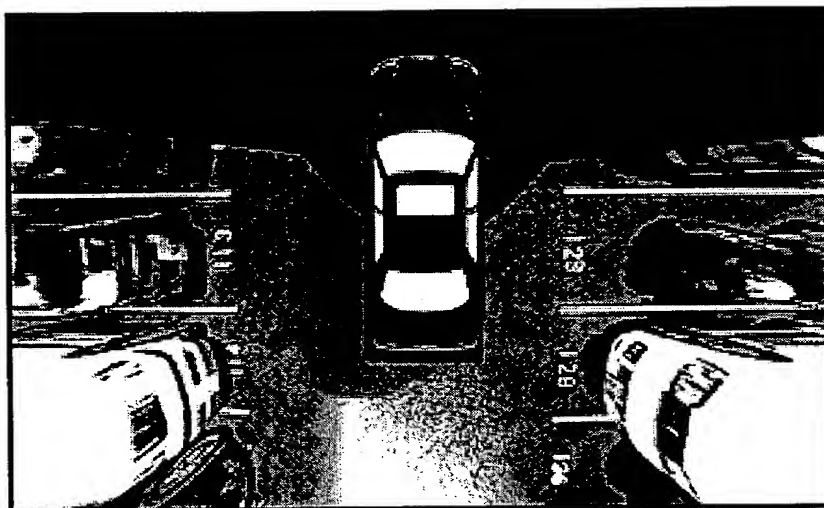
4/47

FIG. 4



5/47

FIG. 5



09/807654-0044-004

6/47

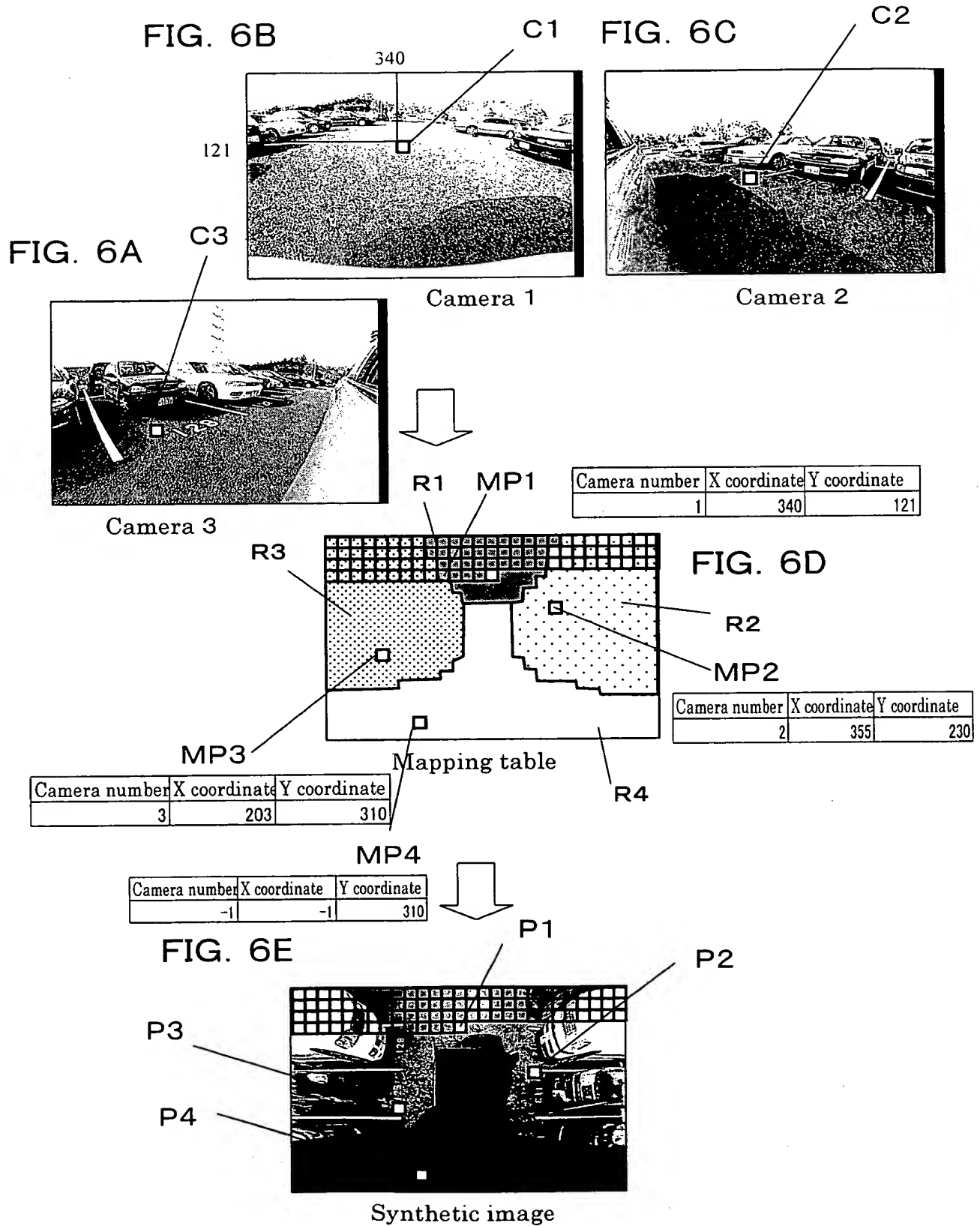
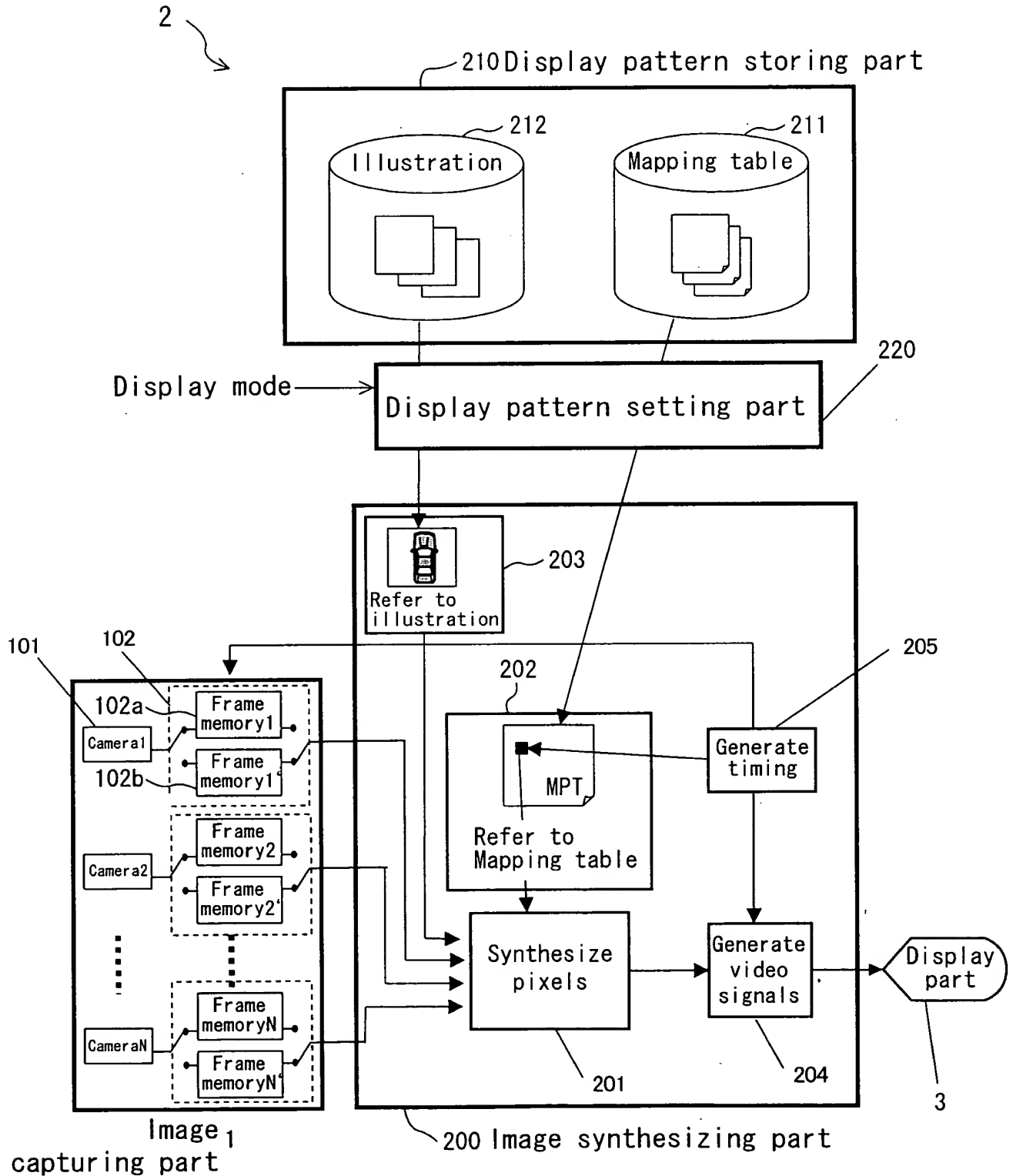


FIG. 7



8/47

FIG. 8

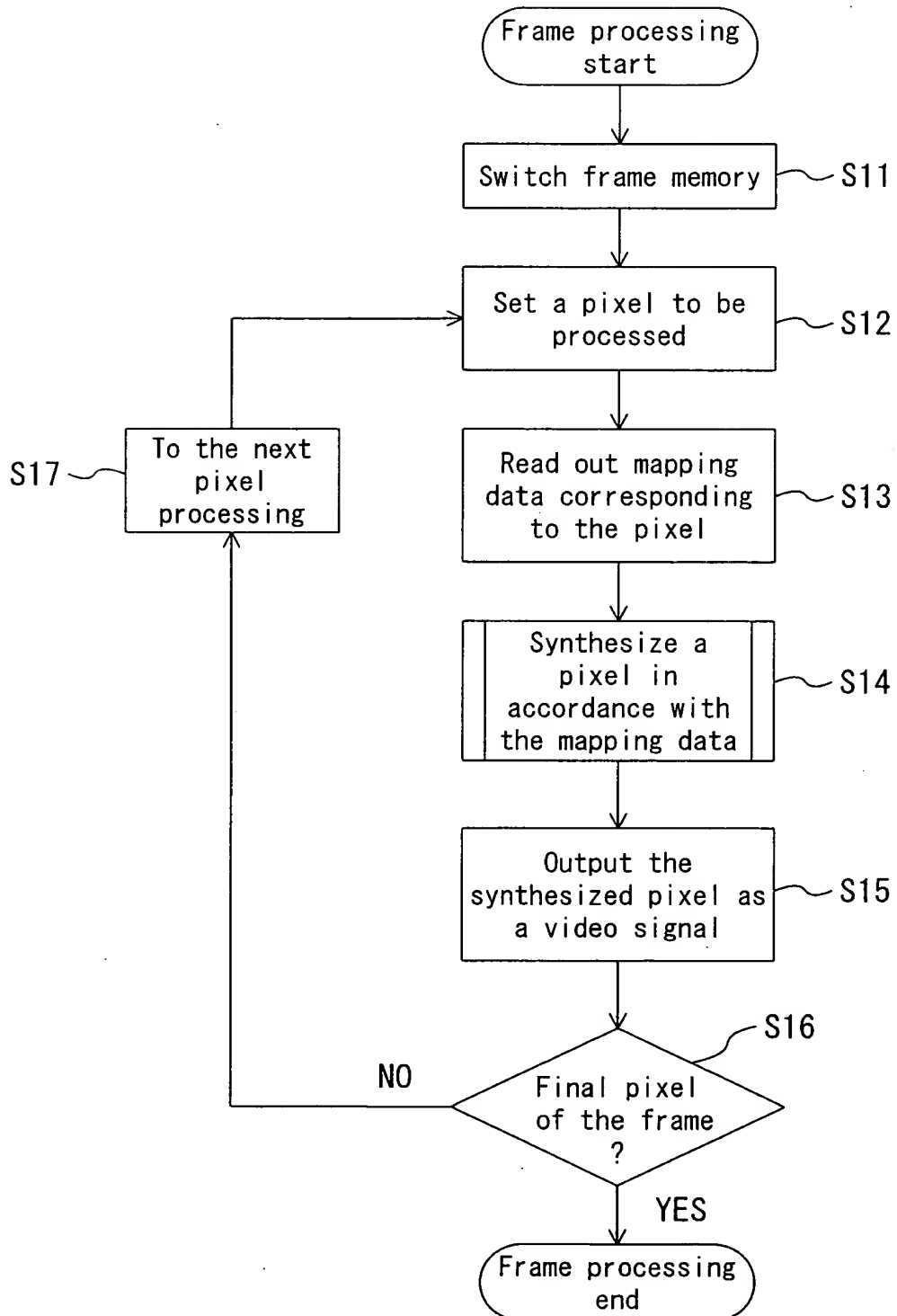
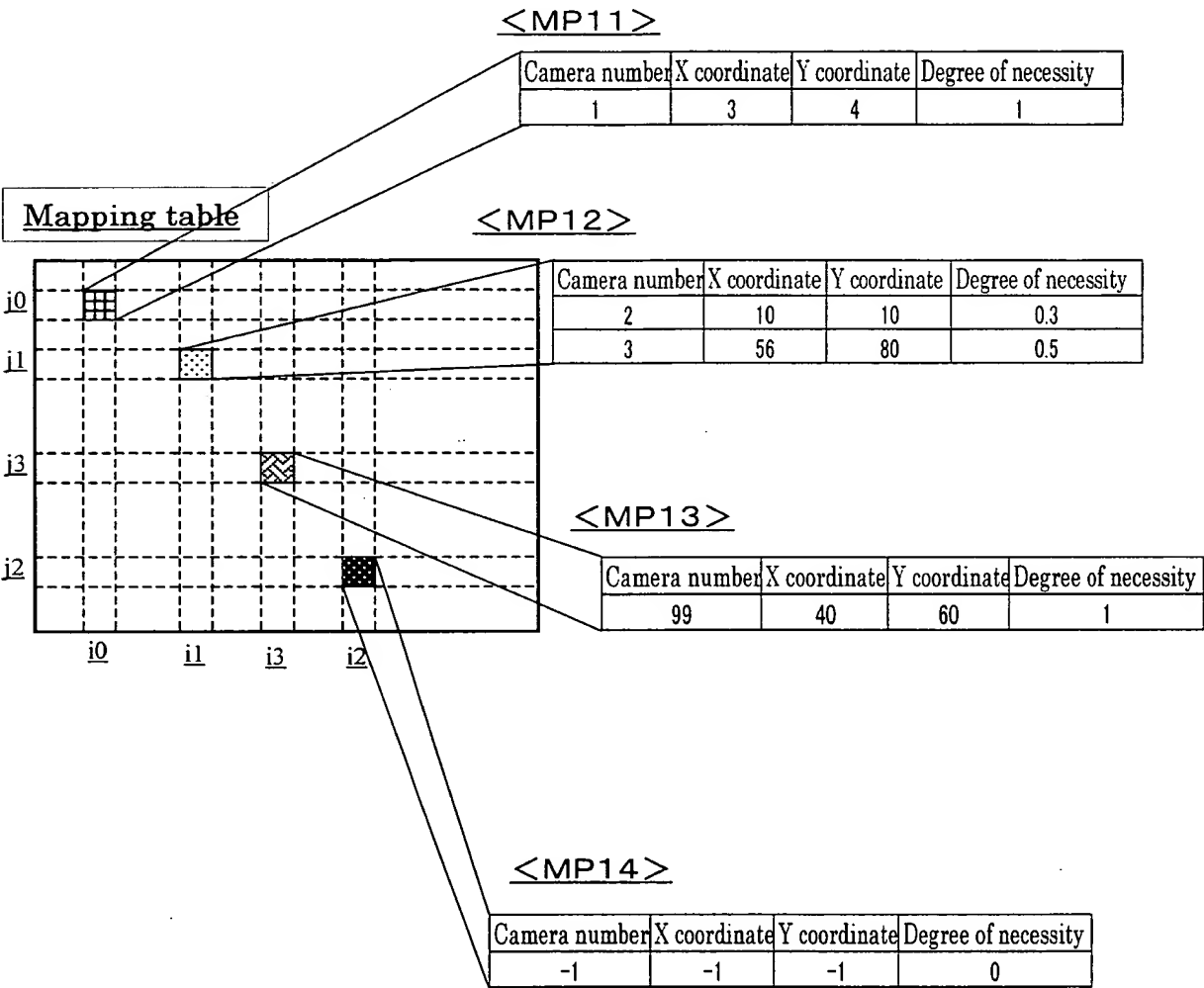
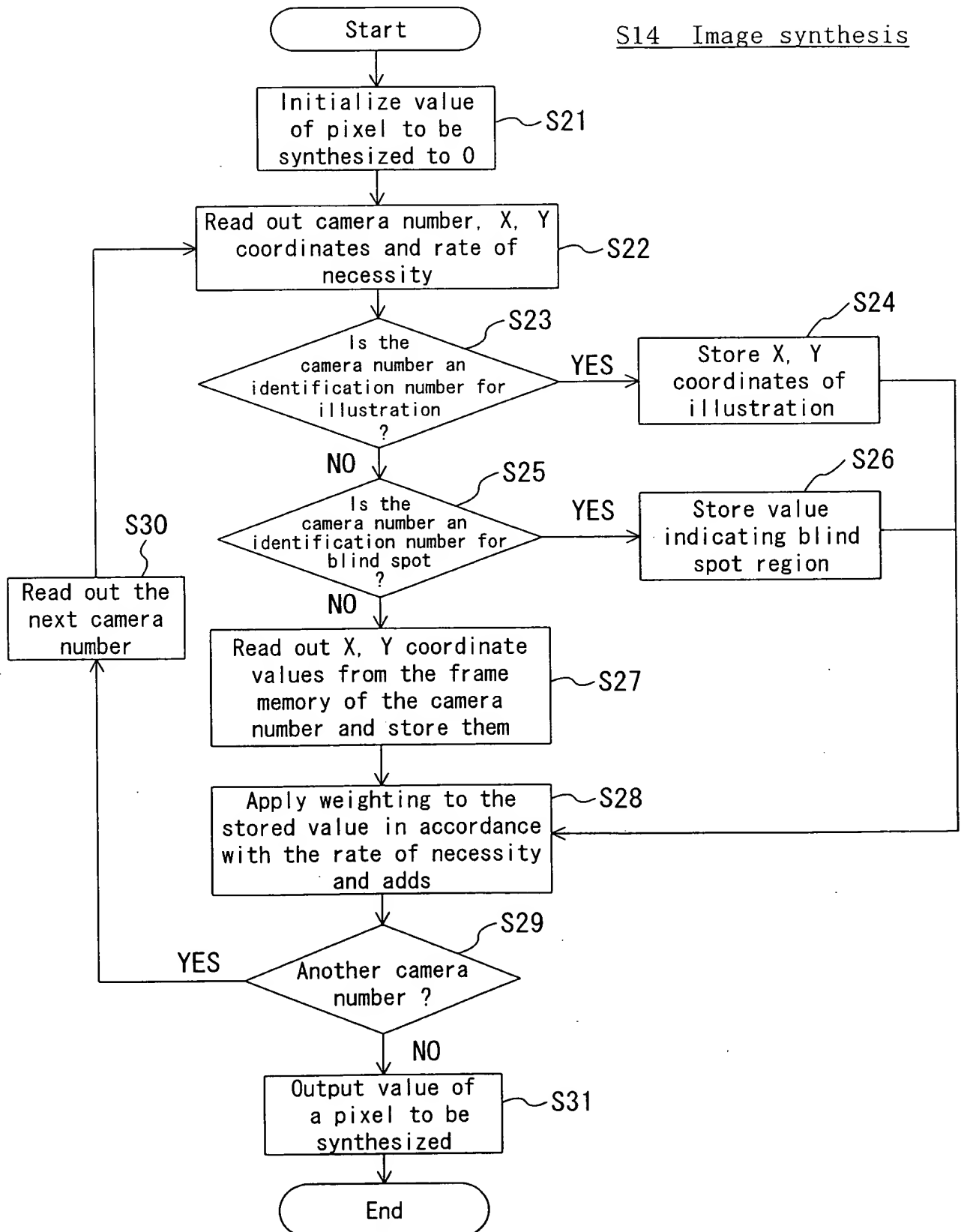


FIG. 9



10/47

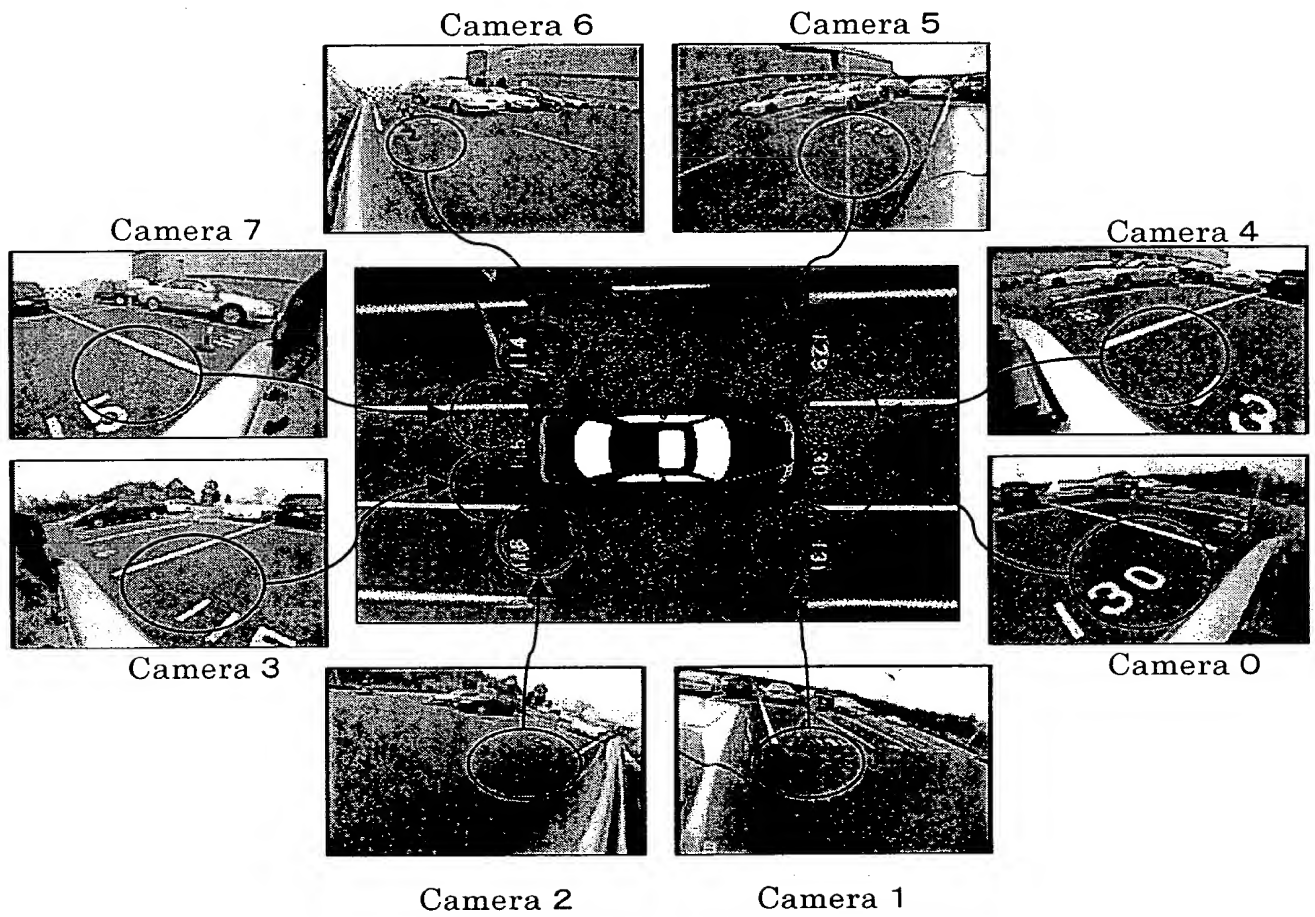
FIG. 10



● ● ● ● ● ● ● ● ● ●

12/47

FIG. 12



13/47

FIG. 13

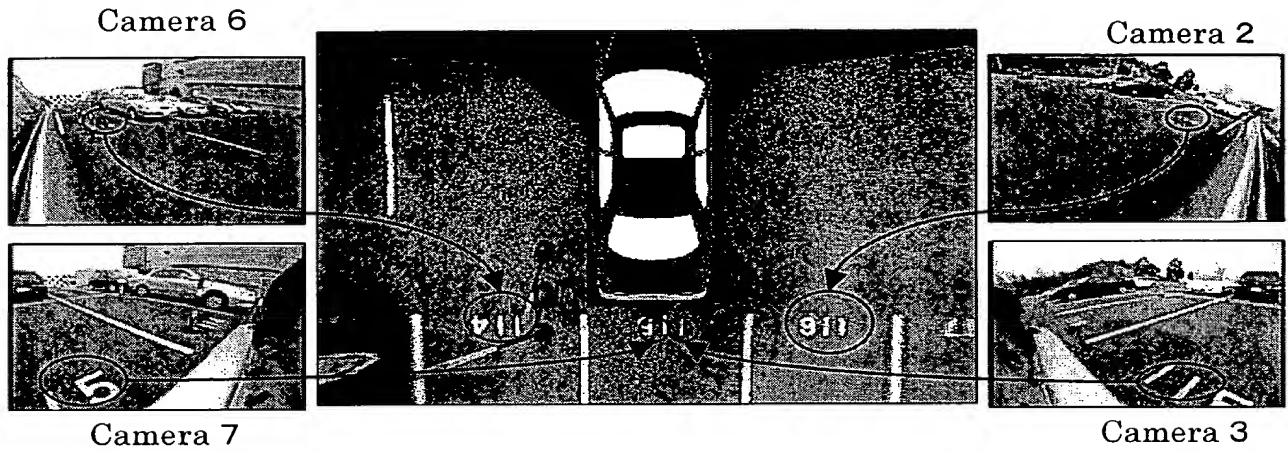
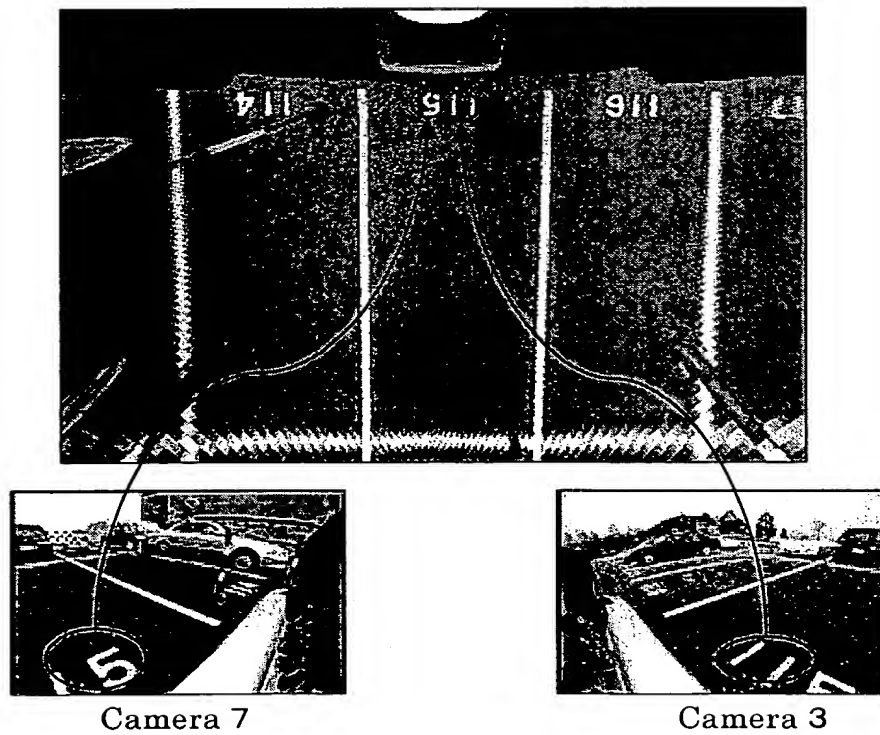
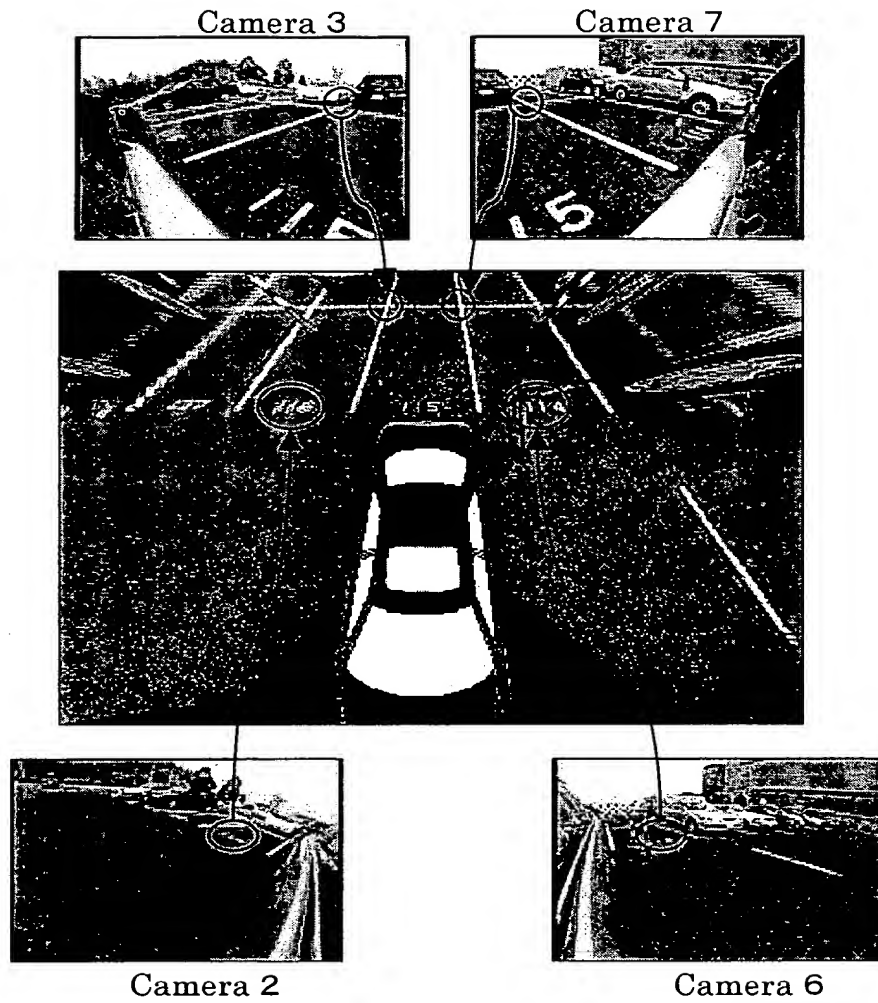


FIG. 14



14/47

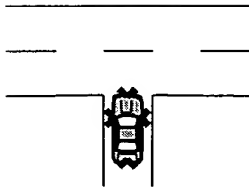
FIG. 15



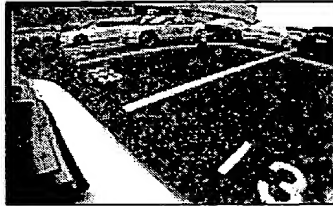
FILED 1994-08-08

15/47

FIG. 16



Camera 4



Camera 0

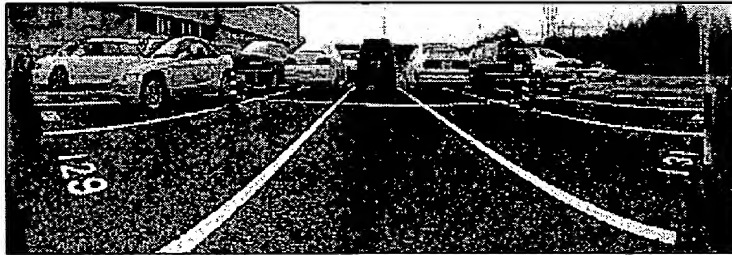
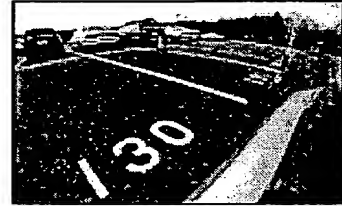
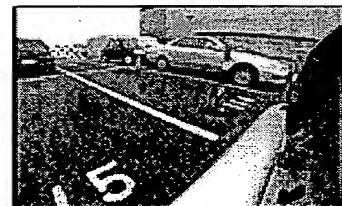


FIG. 17

Camera 3



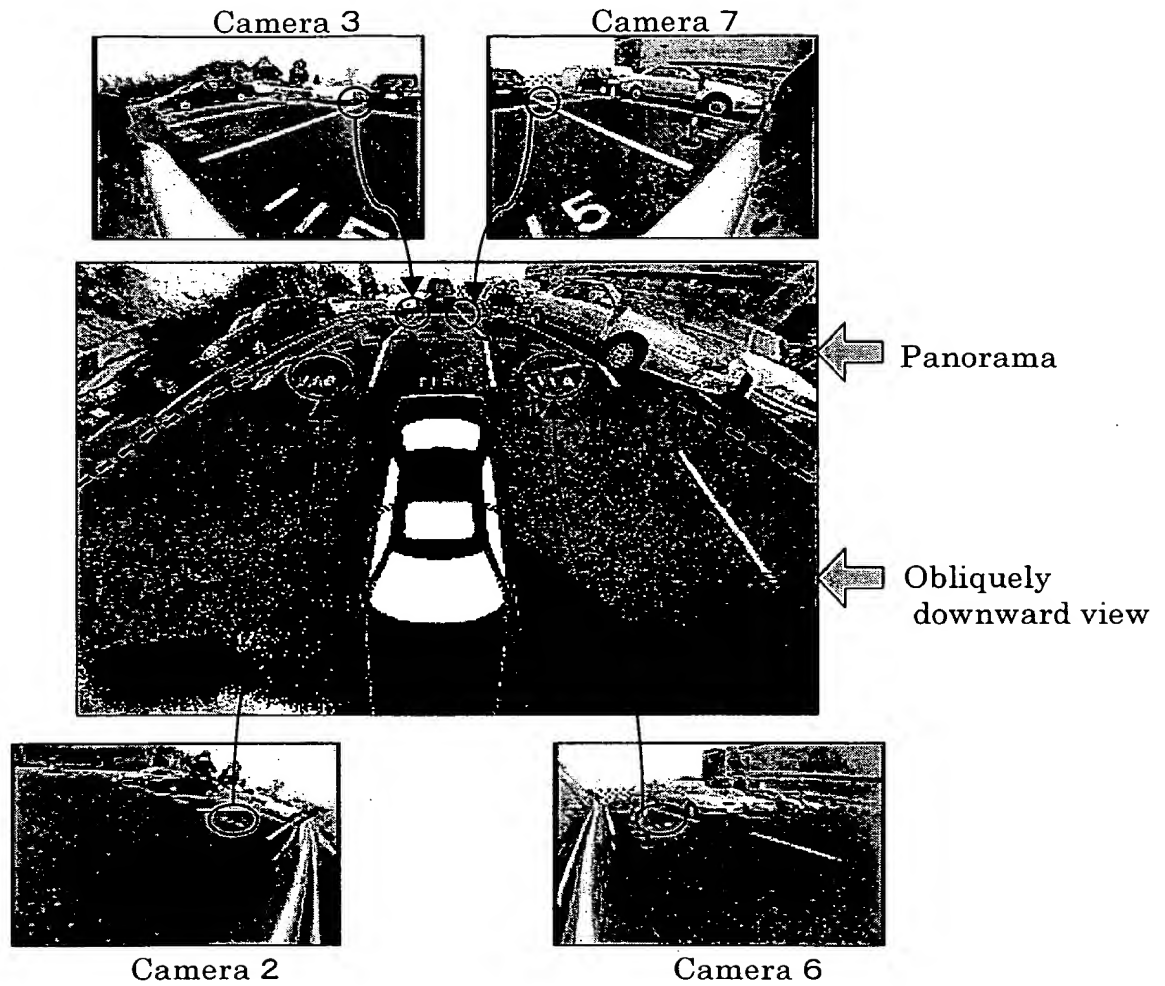
Camera 7



09/807654-15920360

16/47

FIG. 18



FILE NO. 19920000

17/47

FIG. 19A

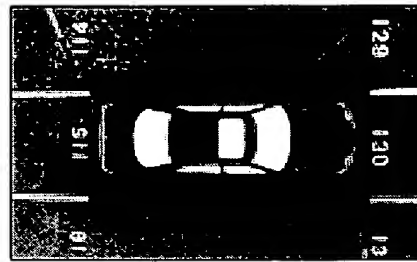
Virtual point of view
height : 2.75m

FIG. 19B

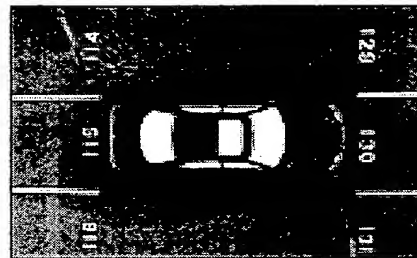
Virtual point of view
height : 3m

FIG. 19C

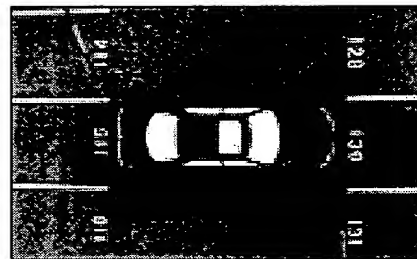
Virtual point of view
height : 3.25m

FIG. 19D

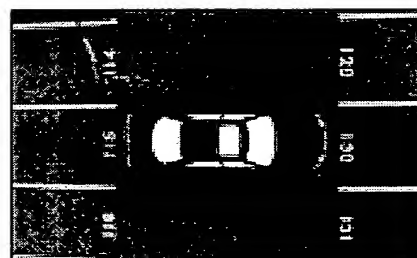
Virtual point of view
height : 3.5m

FIG. 19E

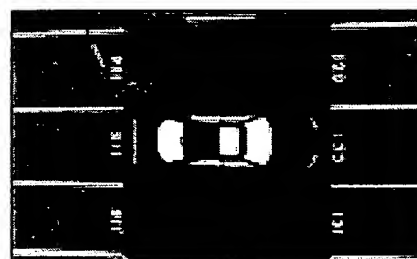
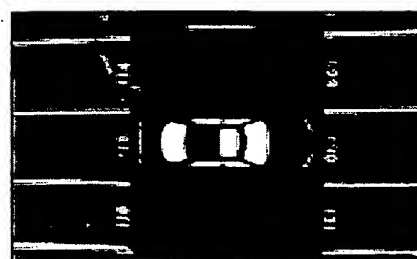
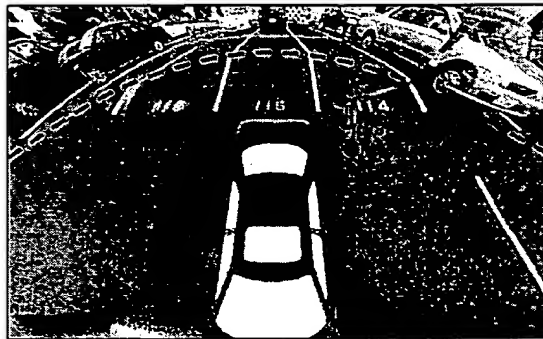
Virtual point of view
height : 3.75m

FIG. 19F

Virtual point of view
height : 4m
 Zoom-up
 <==>
 Zoom-down

18/47

FIG. 20A



Orientation: 22° backward
(Model: Road surface plane +
quasi-cylindrical surface)

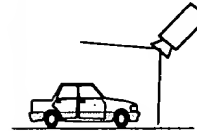
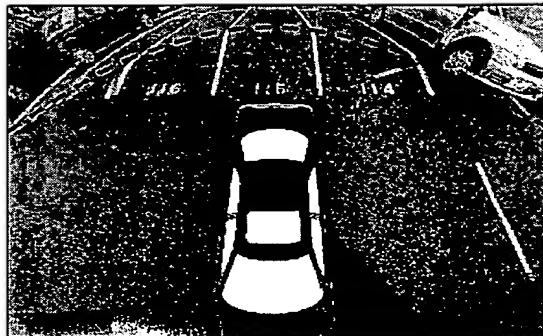


FIG. 20B



Orientation: 17° backward
(Model: Road surface plane +
quasi-cylindrical surface)

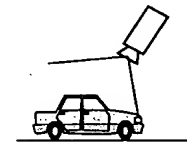
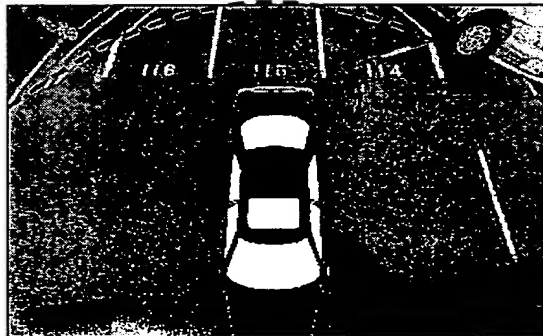


FIG. 20C



Orientation: 11° backward
(Model: Road surface plane +
quasi-cylindrical surface)

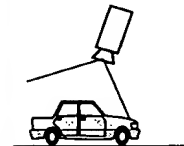
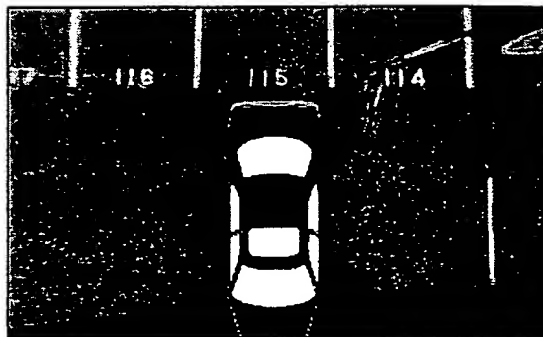
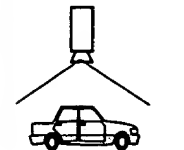


FIG. 20D

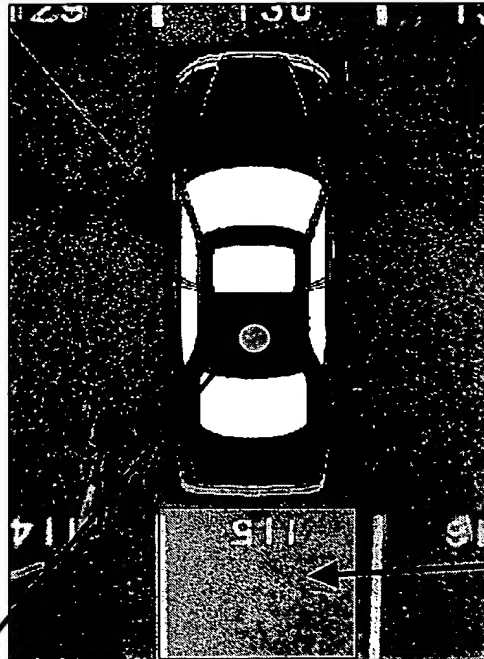


Orientation:
straight downward
(Model : road surface plane)



19/47

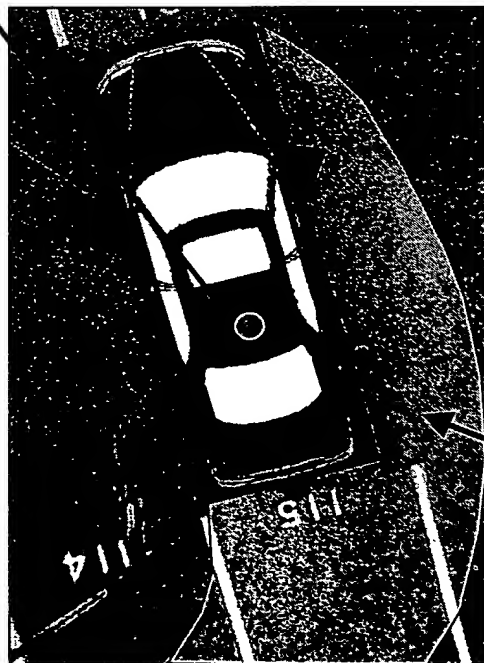
FIG. 21A



Region occupied by an automobile when the automobile is moved.

Virtual point of view

FIG. 21B

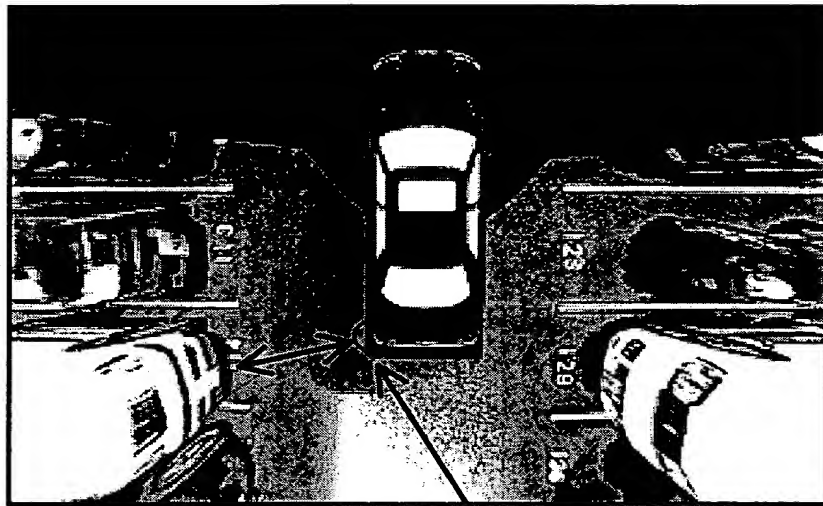


Region occupied by an automobile when the automobile is moved.

FIG. 21A

20/47

FIG. 22A



Object detecting
sensor

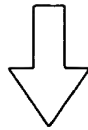
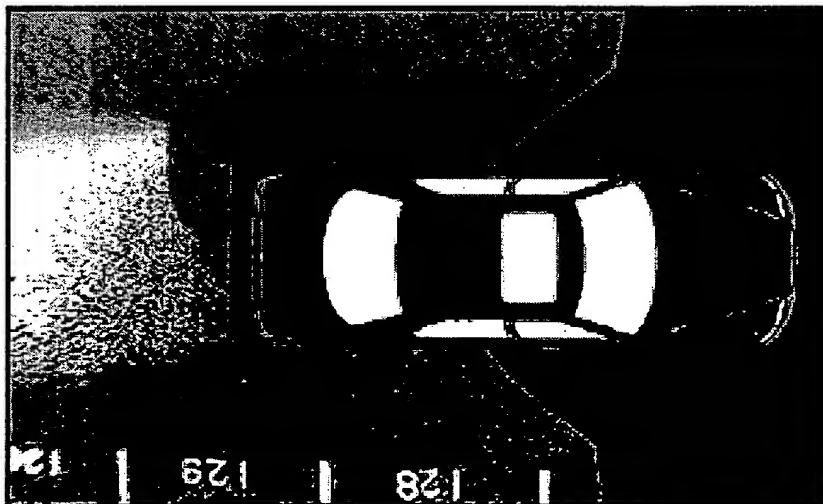


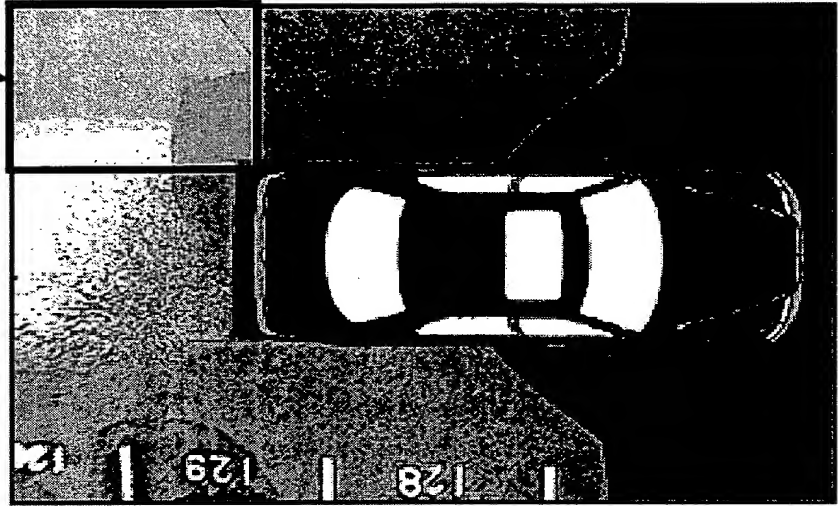
FIG. 22B



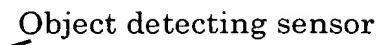
21/47

FIG. 23

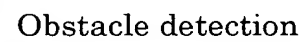
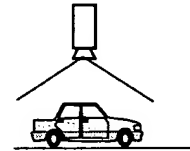
Region where an
obstacle is present



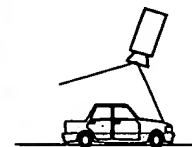
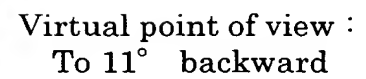
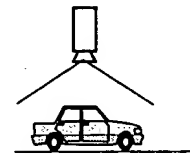
09/807654-000031



Virtual point of view :
Straight downward



Virtual point of view :
Straight downward



23/47

FIG. 25

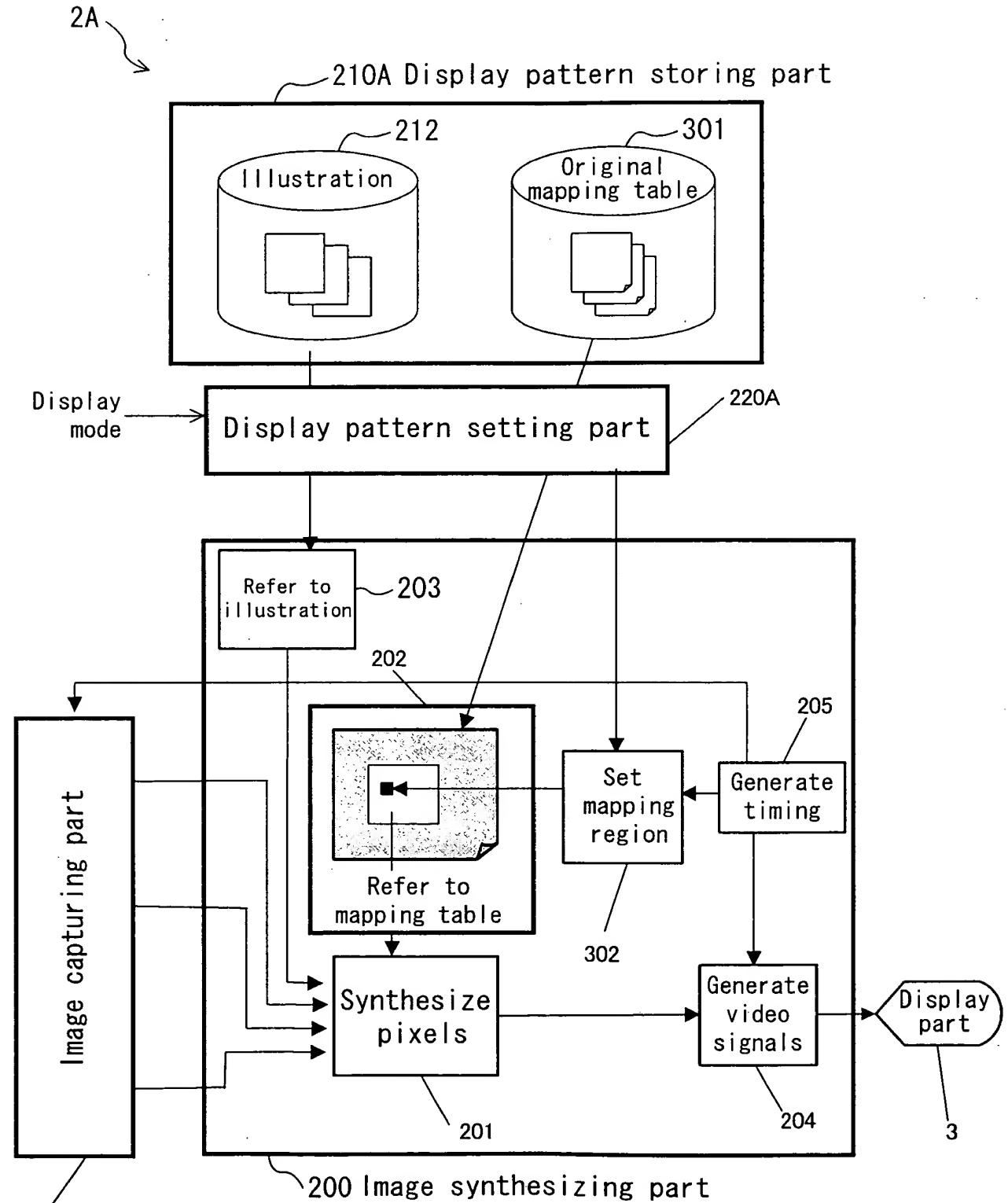


FIG. 26B

FIG. 26A

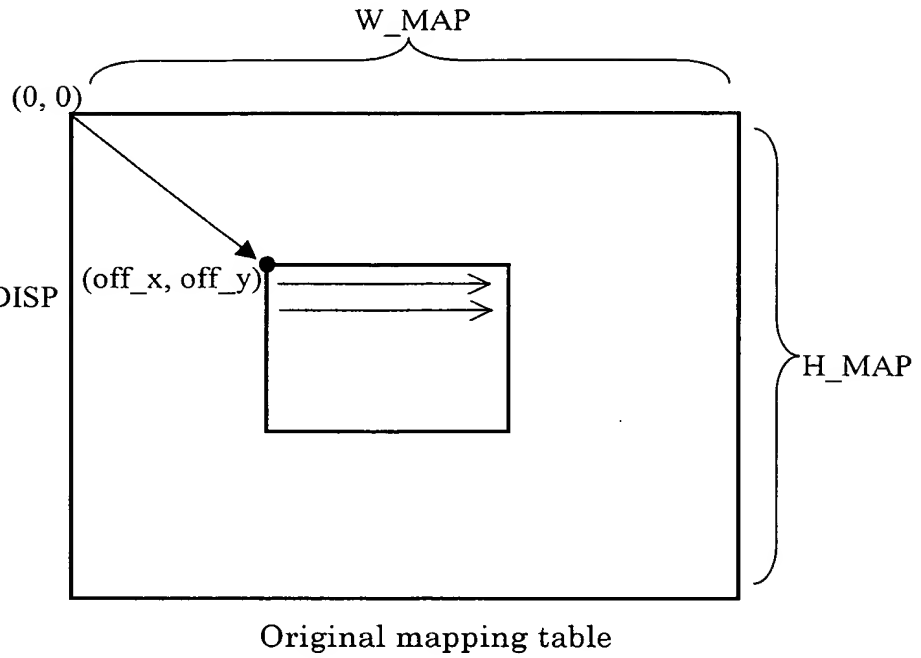
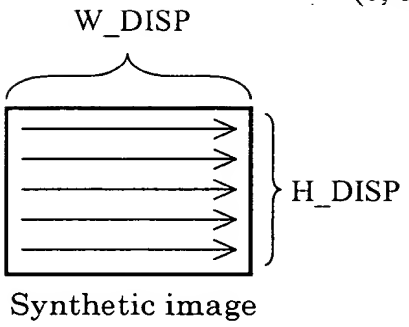
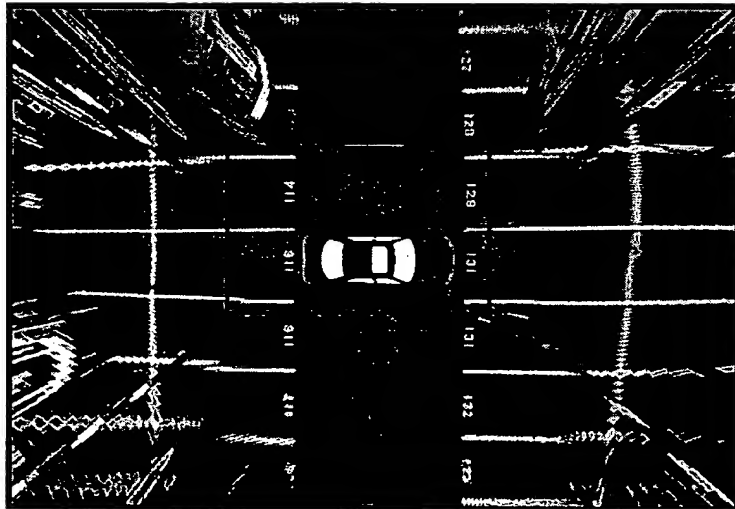
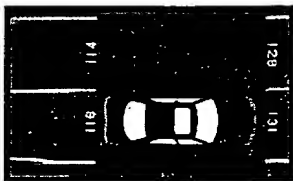


FIG. 26D

FIG. 26C



25/47

FIG. 27B

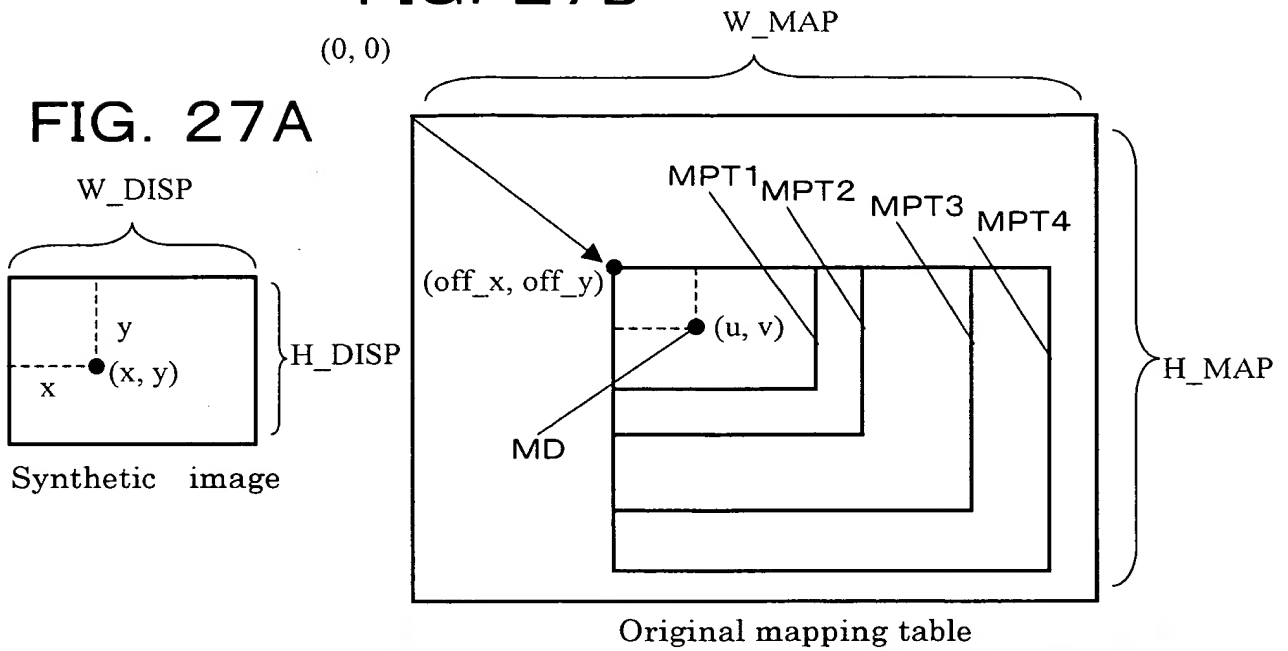


FIG. 27C

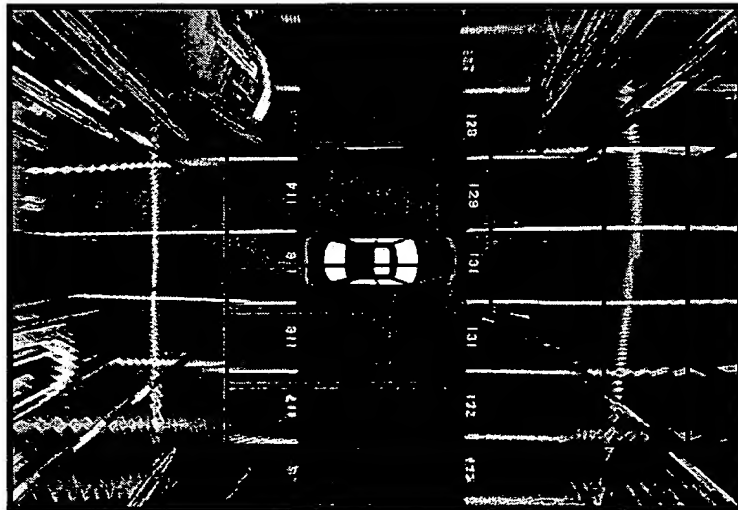
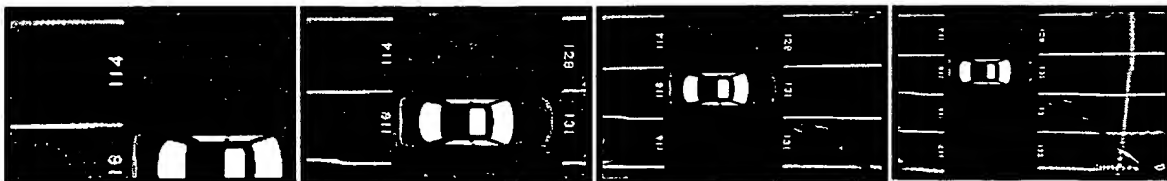


FIG. 27D

FIG. 27E

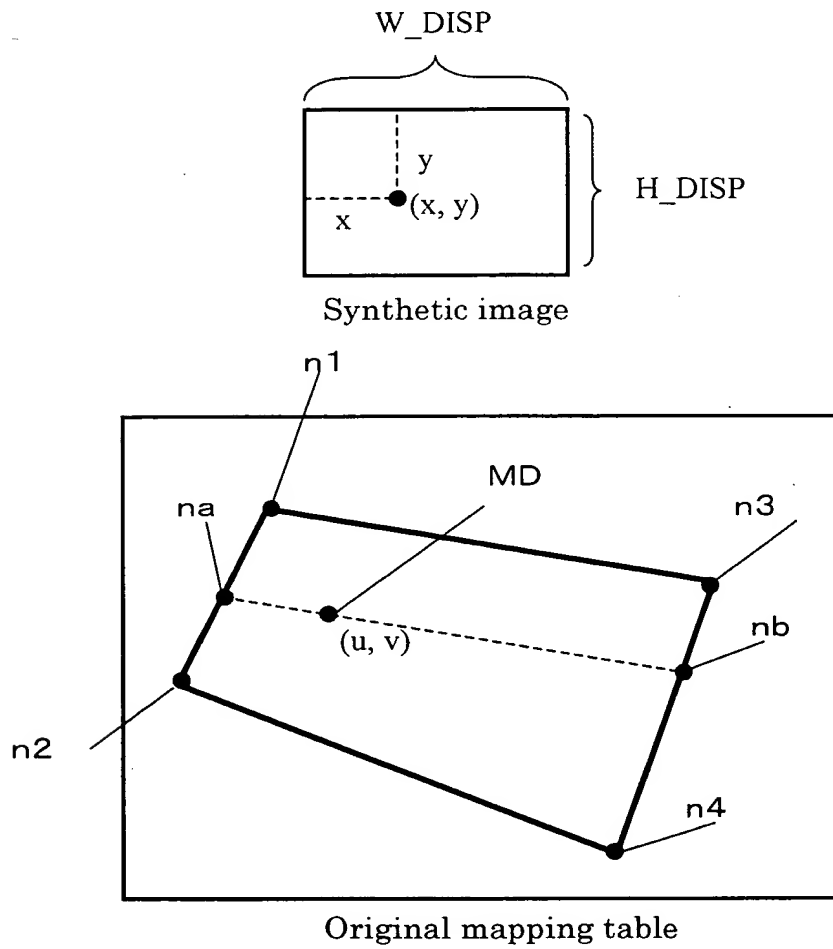
FIG. 27F

FIG. 27G



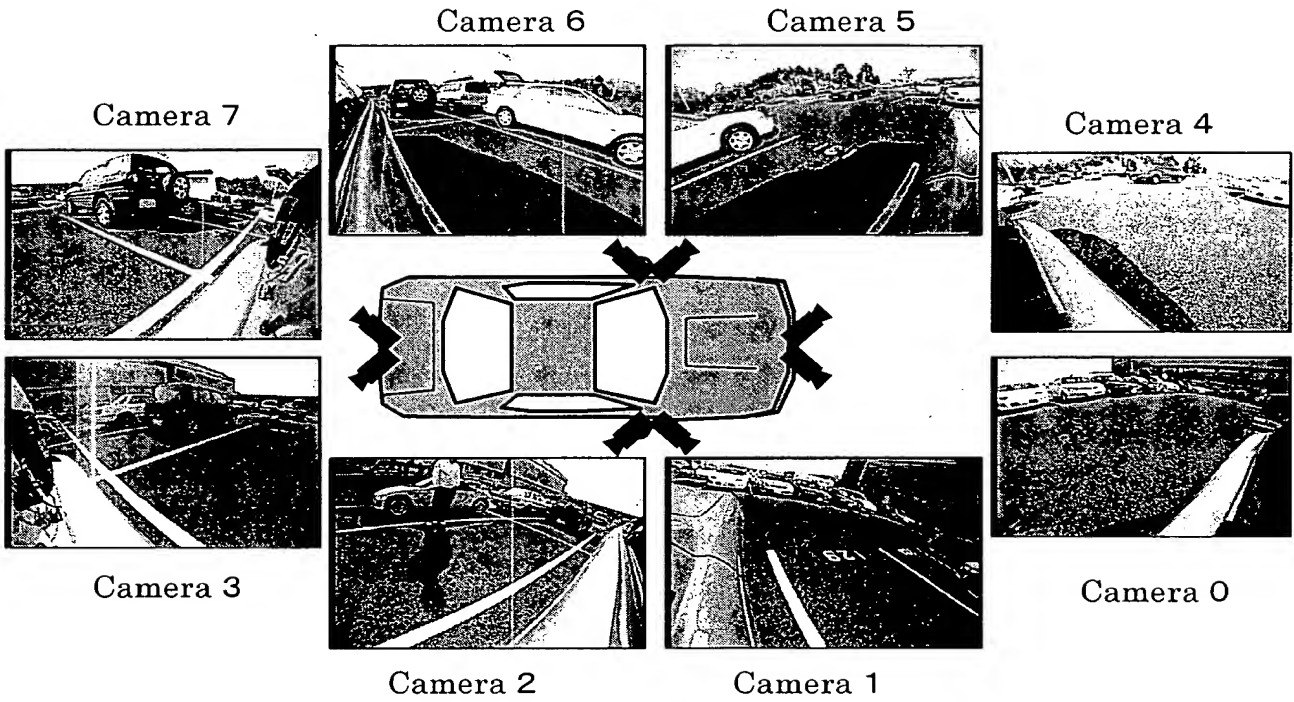
26/47

FIG. 28



27/47

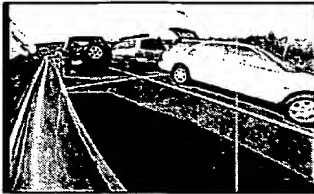
FIG . 29



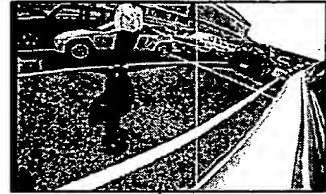
28/47

FIG. 30

Camera 6



Camera 2



Downward view image from above

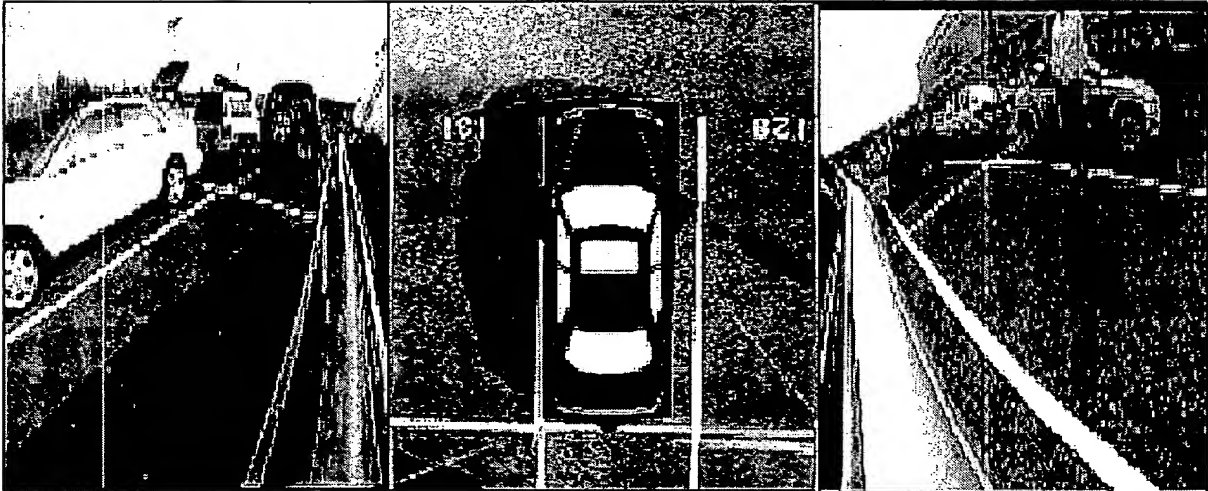


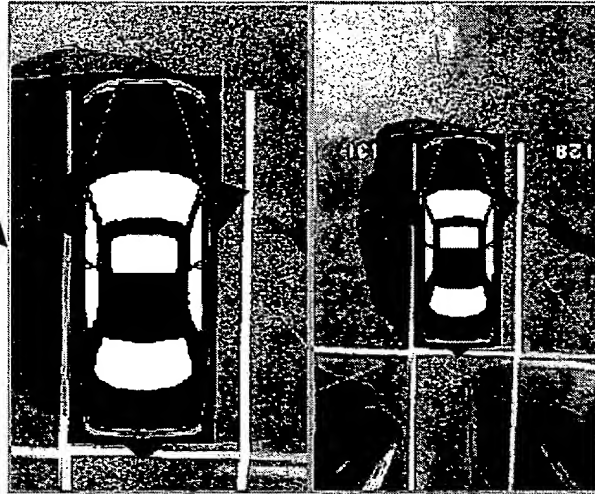
FIG. 30

29/47

FIG. 31

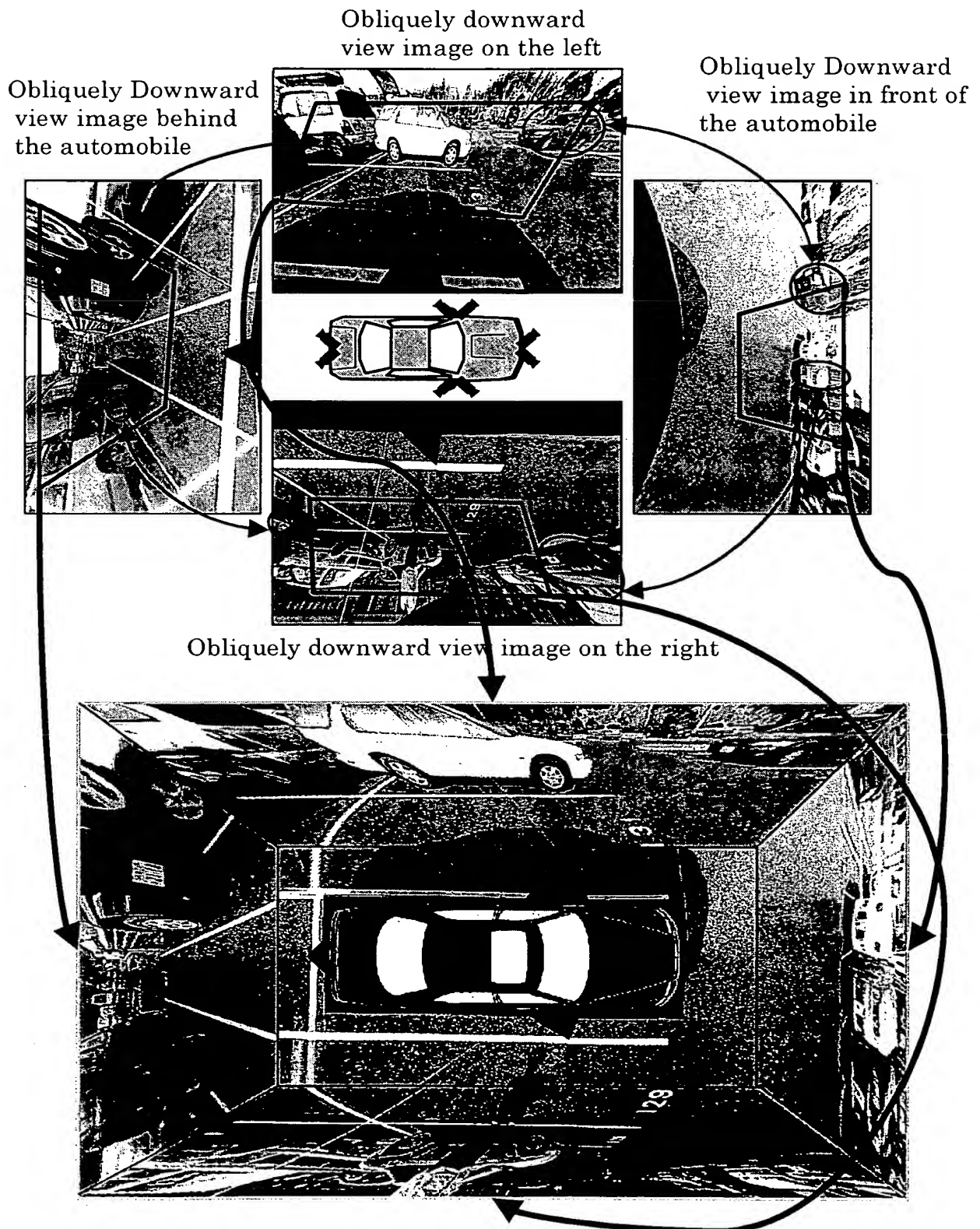
Downward view image in
a narrow range

Downward view image in
a wide range



30/47

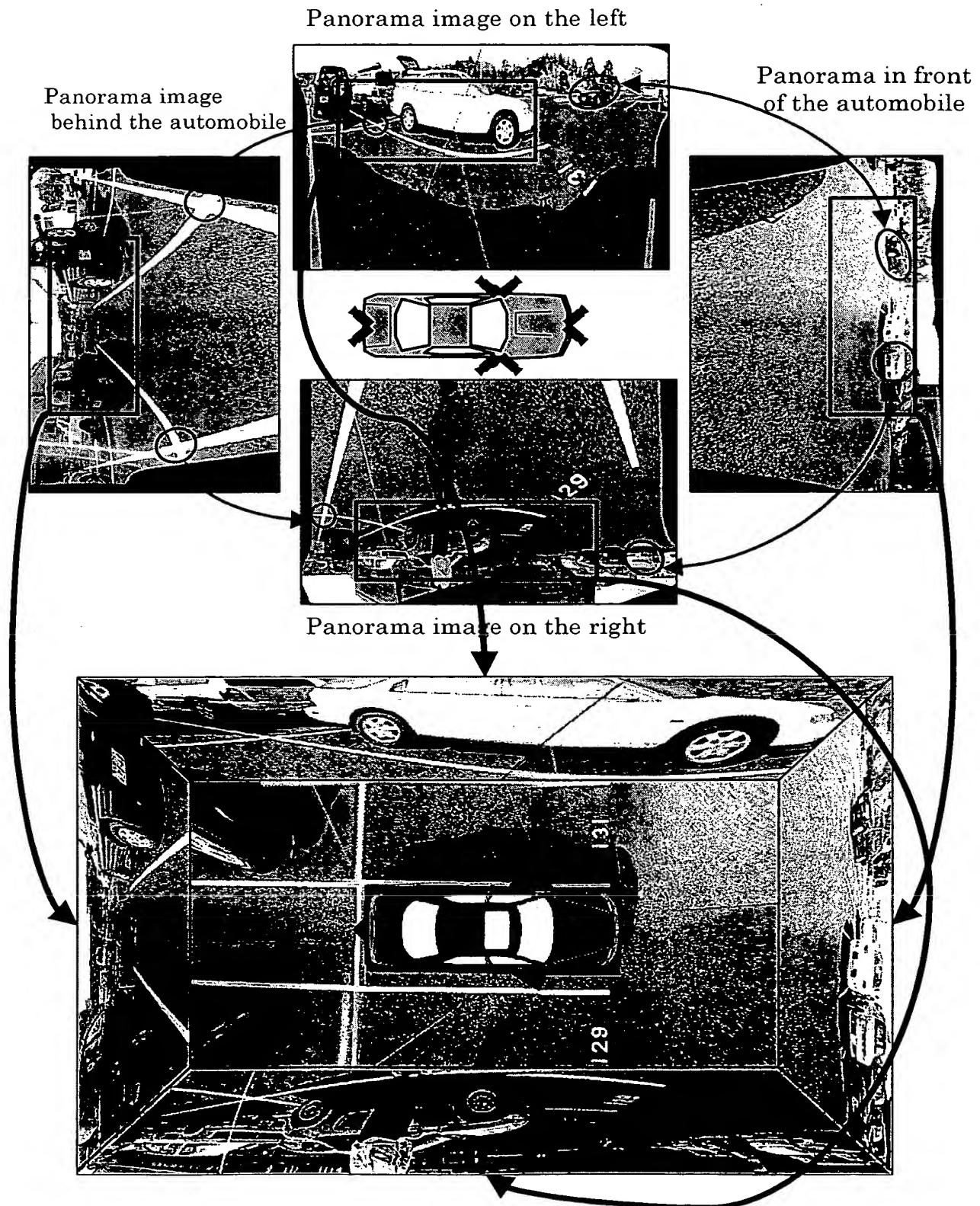
FIG. 32



An aerial, black-and-white photograph of a car lot. A white car is circled with a white line. The car is parked in a space marked with white lines. The lot is filled with other cars, and the background shows a city street with buildings.

32/47

FIG. 34



33/47

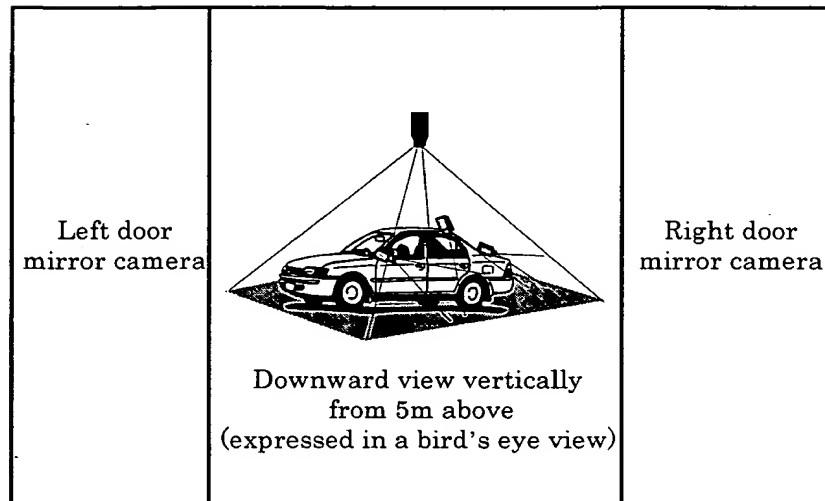
FIG . 35



09807654-041301

34/47

FIG. 36



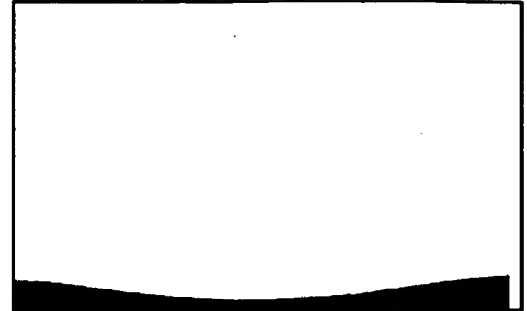
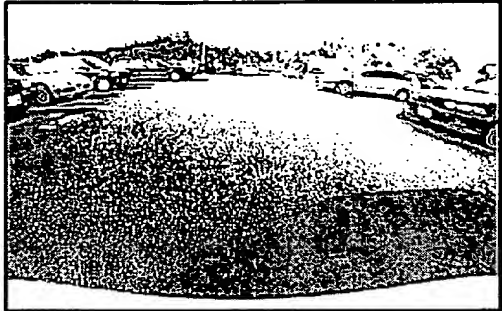
09/807654

35/47
FIG. 37

<Camera image>

<Mask data>

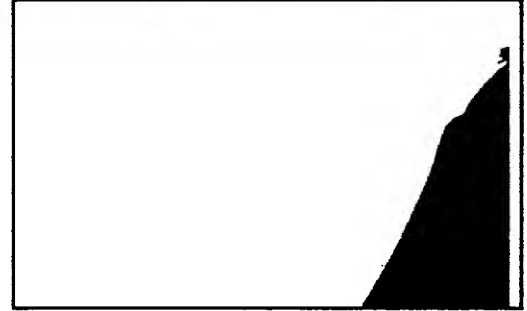
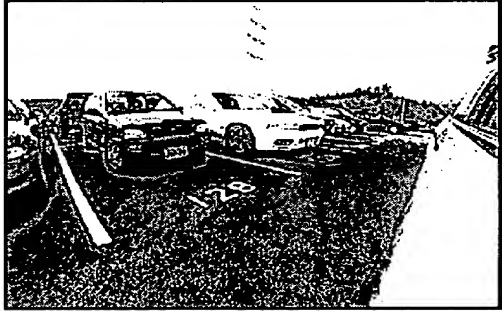
Camera 1



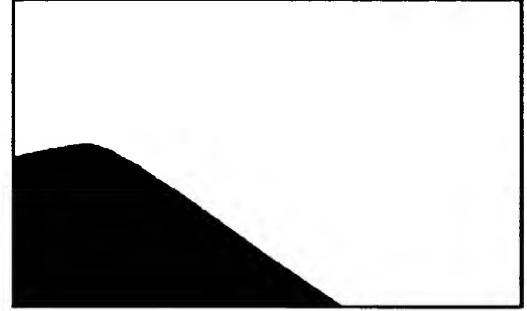
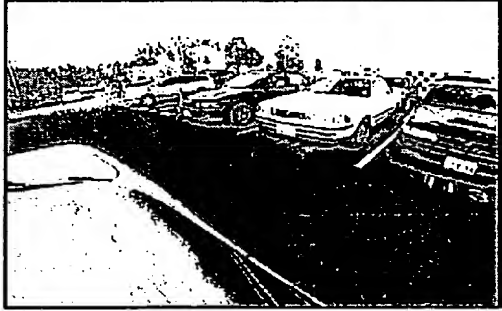
Camera 2



Camera 3



Camera 4



Camera 5

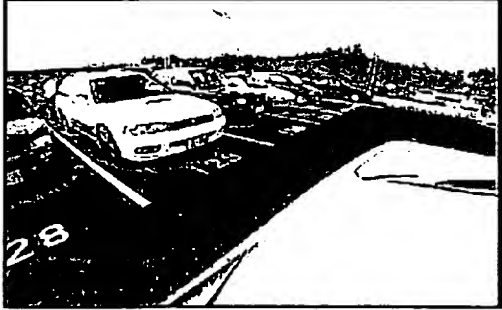
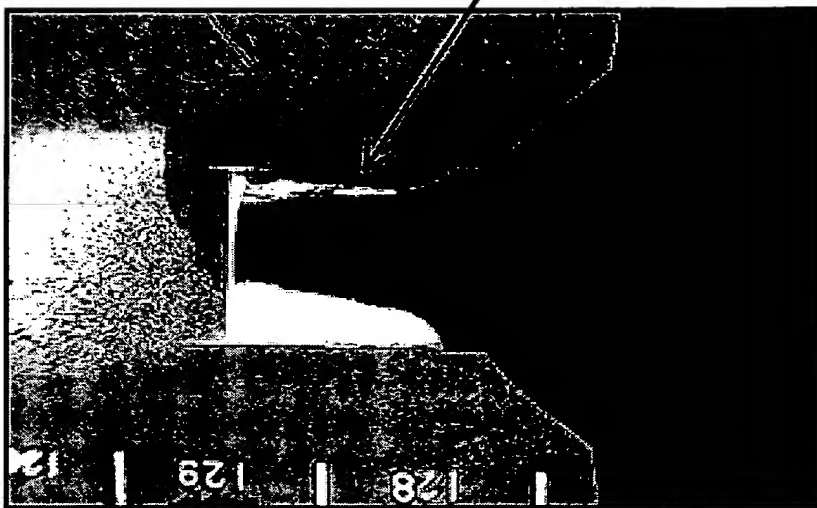
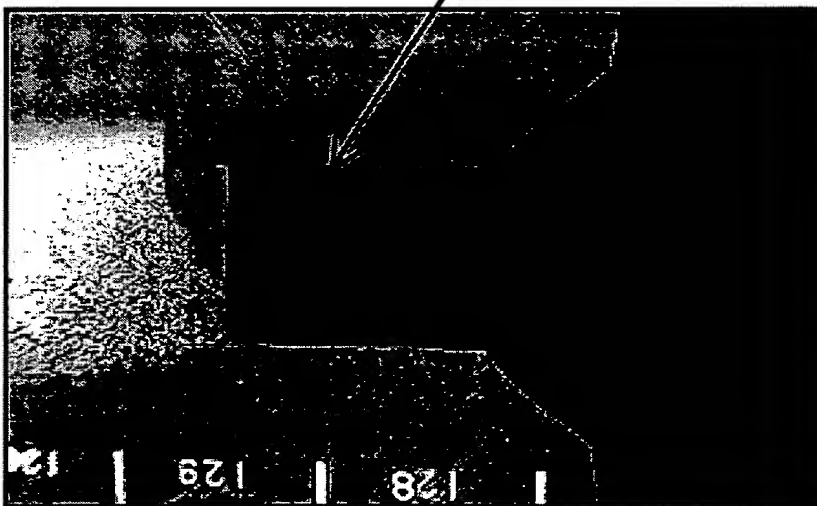


FIG. 37



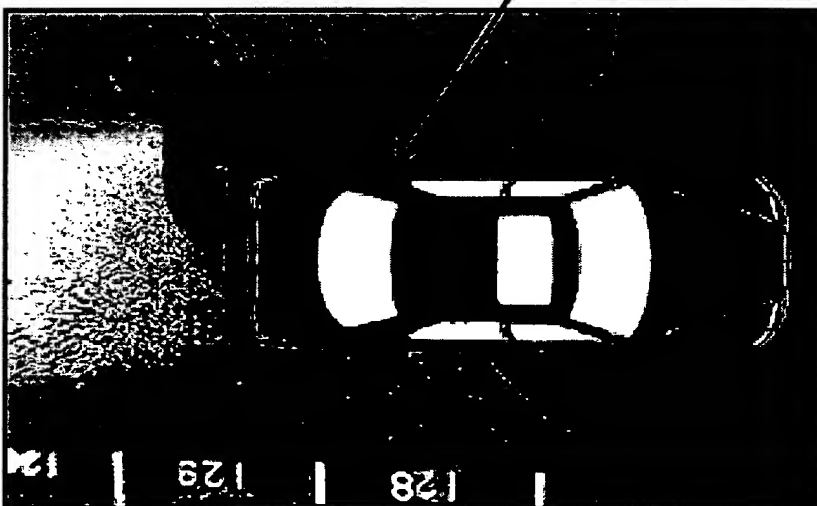
- Projection of the automobile of a user

FIG. 38A



Black the projection
of the automobile

FIG. 38B



Superimpose an image
of the automobile

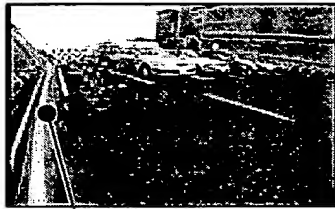
FIG. 38C

[illegible]

37/47

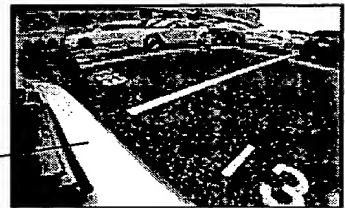
FIG. 39

Camera 6

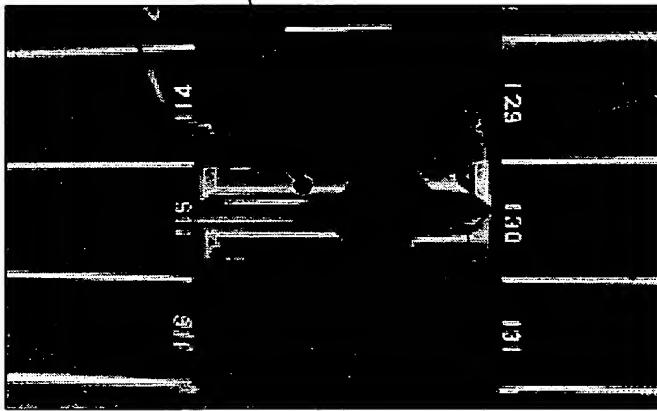


A1

Camera 4

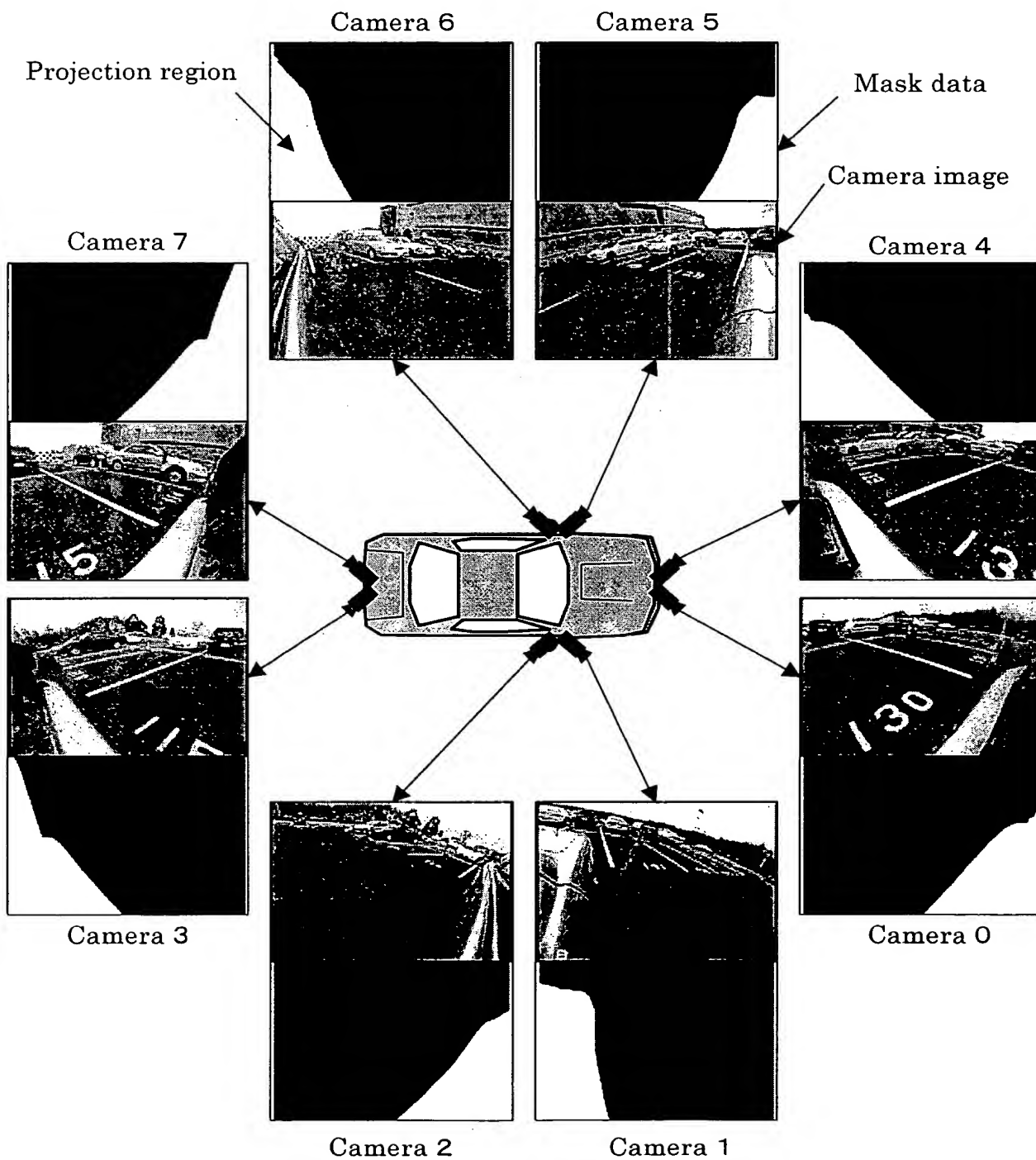


A2



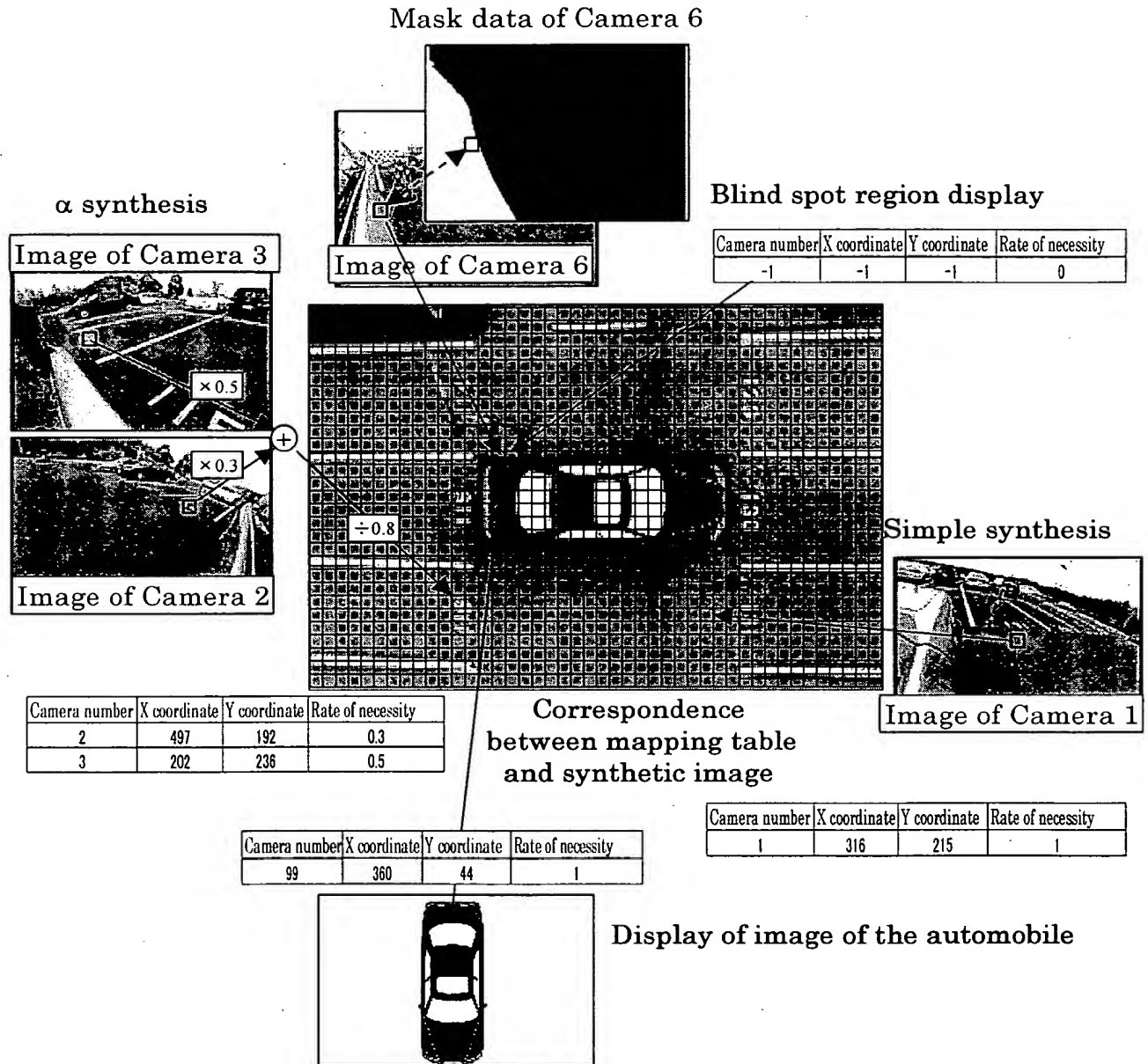
38/47

FIG. 40



39/47

FIG. 41



40/47

FIG. 42

<PT1>

Step 1

Camera number	X coordinate	Y coordinate	Rate of necessity
0	-1	-1	0
1	-1	-1	0
2	-1	-1	0
3	-1	-1	0
4	-1	-1	0
5	-1	-1	0
6	45	200	1
7	-1	-1	0

<PT2>

Camera number	X coordinate	Y coordinate	Rate of necessity
0	-1	-1	0
1	-1	-1	0
2	-1	-1	0
3	-1	-1	0
4	150	230	0.5
5	490	230	0.5
6	-1	-1	0
7	-1	-1	0

<PT3>

Camera number	X coordin	Y coordin	Rate of necessity
0	-1	-1	0
1	-1	-1	0
2	-1	-1	0
3	-1	-1	0
4	-1	-1	0
5	-1	-1	0
6	110	250	1
7	-1	-1	0

<PT4>

Camera number	X coordinate	Y coordinate	Rate of necessity
0	-1	-1	0
1	-1	-1	0
2	600	290	1
3	-1	-1	0
4	-1	-1	0
5	-1	-1	0
6	-1	-1	0
7	-1	-1	0

Step 2

Camera number	X coordinate	Y coordinate	Rate of necessity
0	-1	-1	0
1	-1	-1	0
2	-1	-1	0
3	-1	-1	0
4	-1	-1	0
5	-1	-1	0
6	450	200	1
7	-1	-1	0

Camera number	X coordinate	Y coordinate	Rate of necessity
0	-1	-1	0
1	-1	-1	0
2	-1	-1	0
3	-1	-1	0
4	-1	-1	0
5	490	230	1
6	-1	-1	0
7	-1	-1	0

Camera number	X coordinate	Y coordinate	Rate of necessity
0	-1	-1	0
1	-1	-1	0
2	-1	-1	0
3	-1	-1	0
4	-1	-1	0
5	-1	-1	0
6	-1	-1	0
7	-1	-1	0

Camera number	X coordinate	Y coordinate	Rate of necessity
0	-1	-1	0
1	-1	-1	0
2	-1	-1	0
3	-1	-1	0
4	-1	-1	0
5	-1	-1	0
6	-1	-1	0
7	-1	-1	0

Step 3

Camera number	X coordinate	Y coordinate	Rate of necessity
6	45	200	1

Camera number	X coordinate	Y coordinate	Rate of necessity
5	490	230	1

Camera number	X coordinate	Y coordinate	Rate of necessity
-1	-1	-1	0

Camera number	X coordinate	Y coordinate	Rate of necessity
-1	-1	-1	0

Step 4

Camera number	X coordinate	Y coordinate	Rate of necessity
6	45	200	1

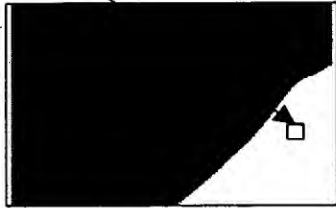
Camera number	X coordinate	Y coordinate	Rate of necessity
5	490	230	1

Camera number	X coordinate	Y coordinate	Rate of necessity
-1	-1	-1	0

Camera number	X coordinate	Y coordinate	Rate of necessity
99	360	44	1

FIG. 43A

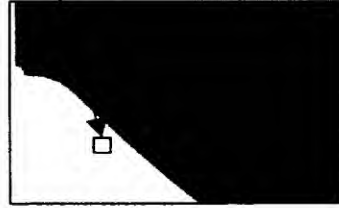
Correspond to PT4 (660, 290)



Mask data of Camera 2

FIG. 43B

Correspond to PT2 (150, 280)



Mask data of Camera 4

FIG. 43C

Correspond to PT2(480, 280)



Mask data of Camera 5

FIG. 43D

Correspond to PT1(450, 200)

Correspond to PT3(110, 250)



Mask data of Camera 6

FIG. 43A

FIG. 44A

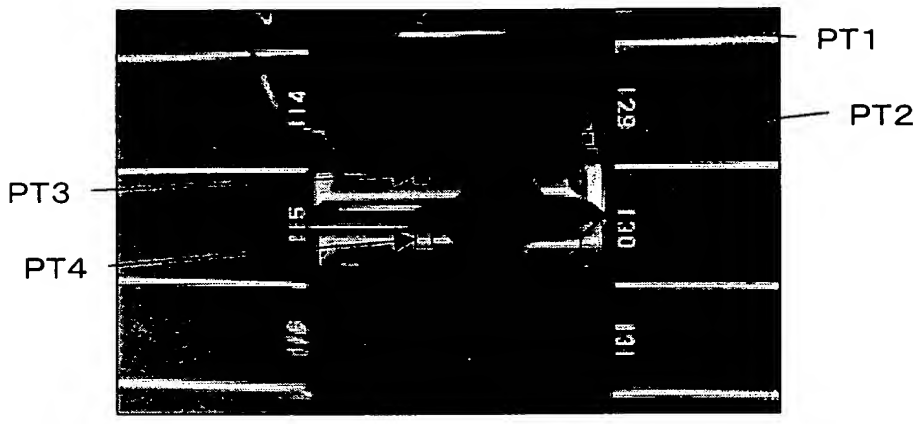


FIG. 44B

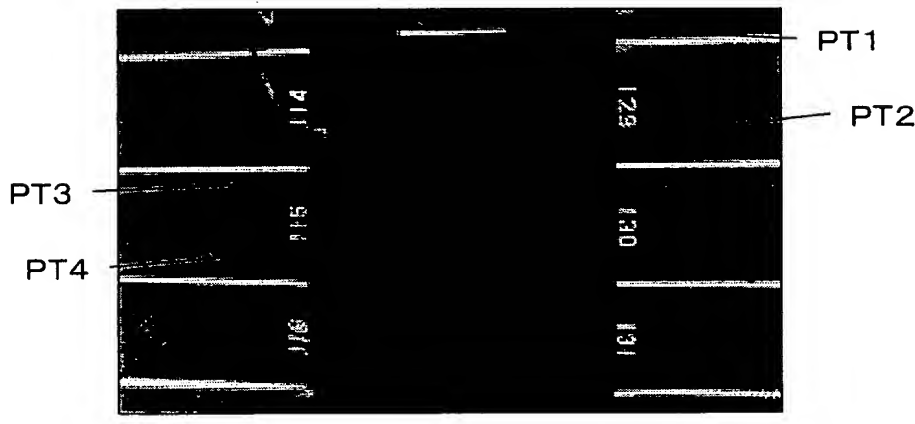


FIG. 44C

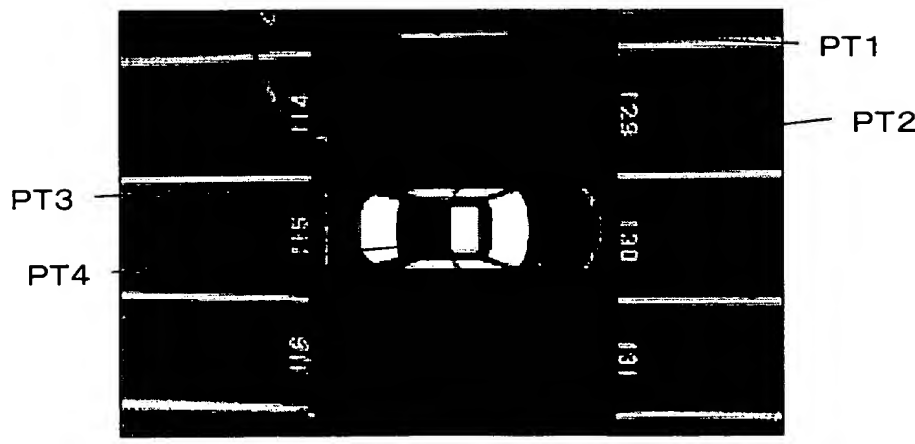
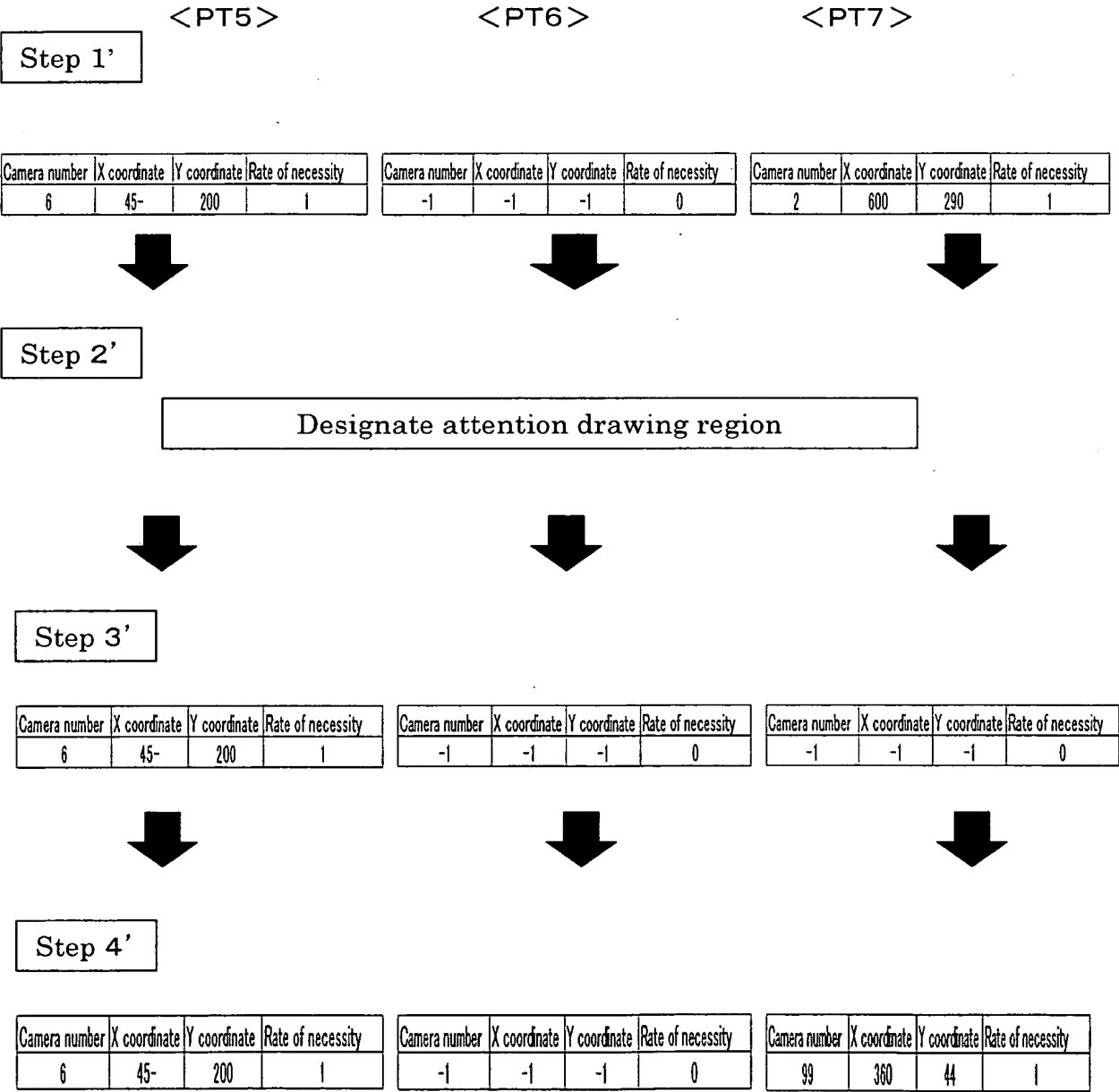


FIG. 45



44/47

FIG. 46A

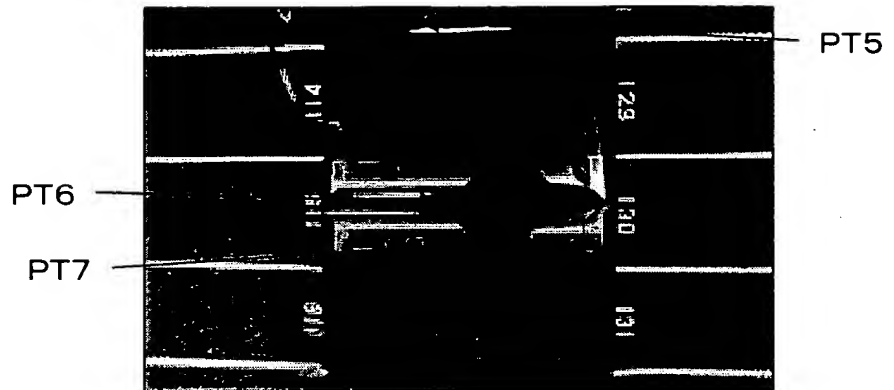


FIG. 46B

Attention
drawing region

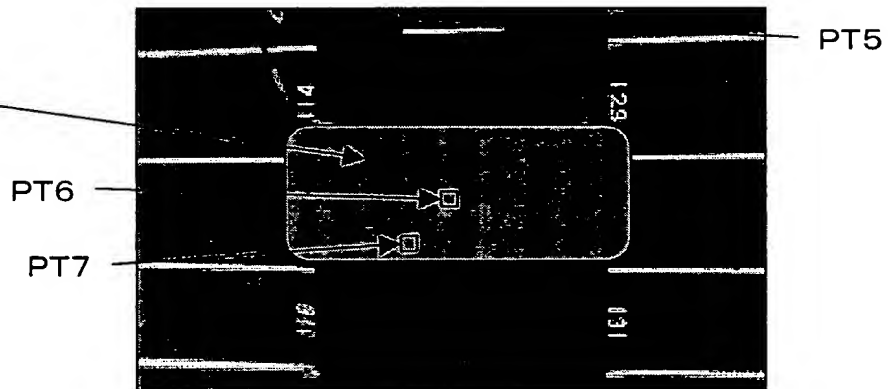


FIG. 46C

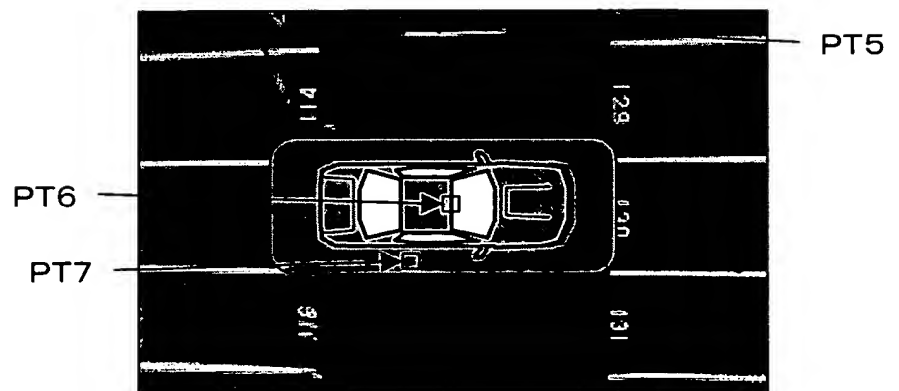


FIG. 47

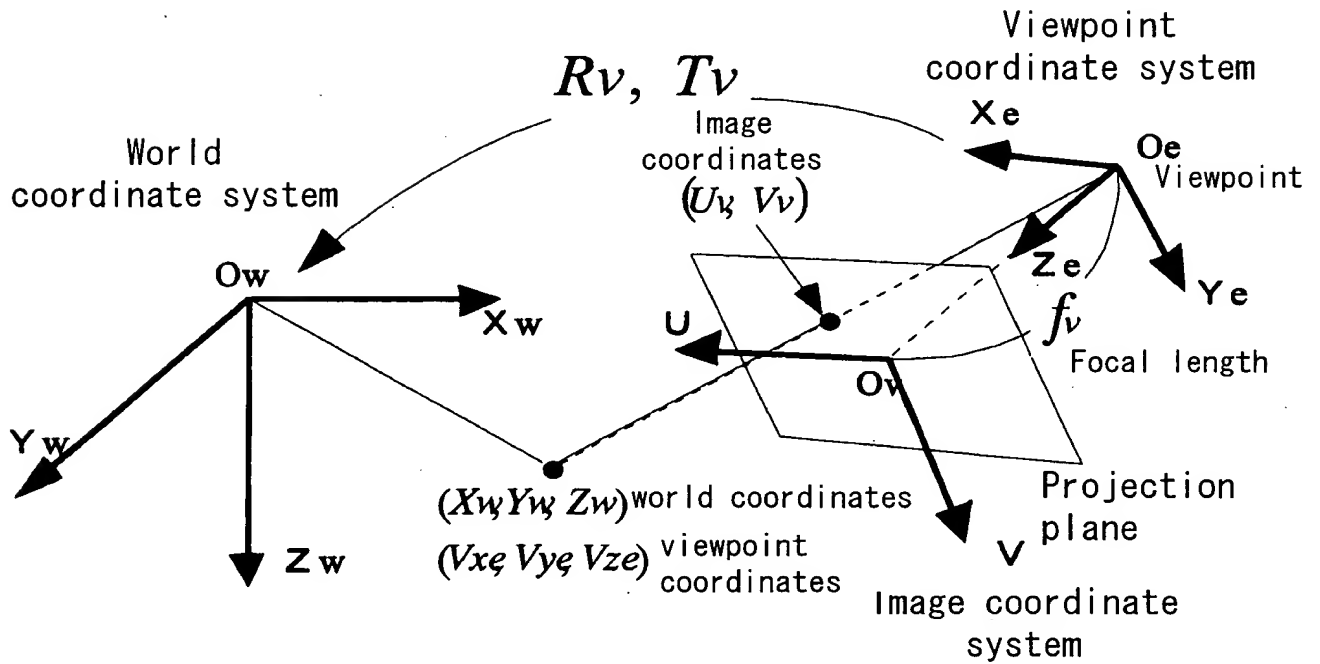
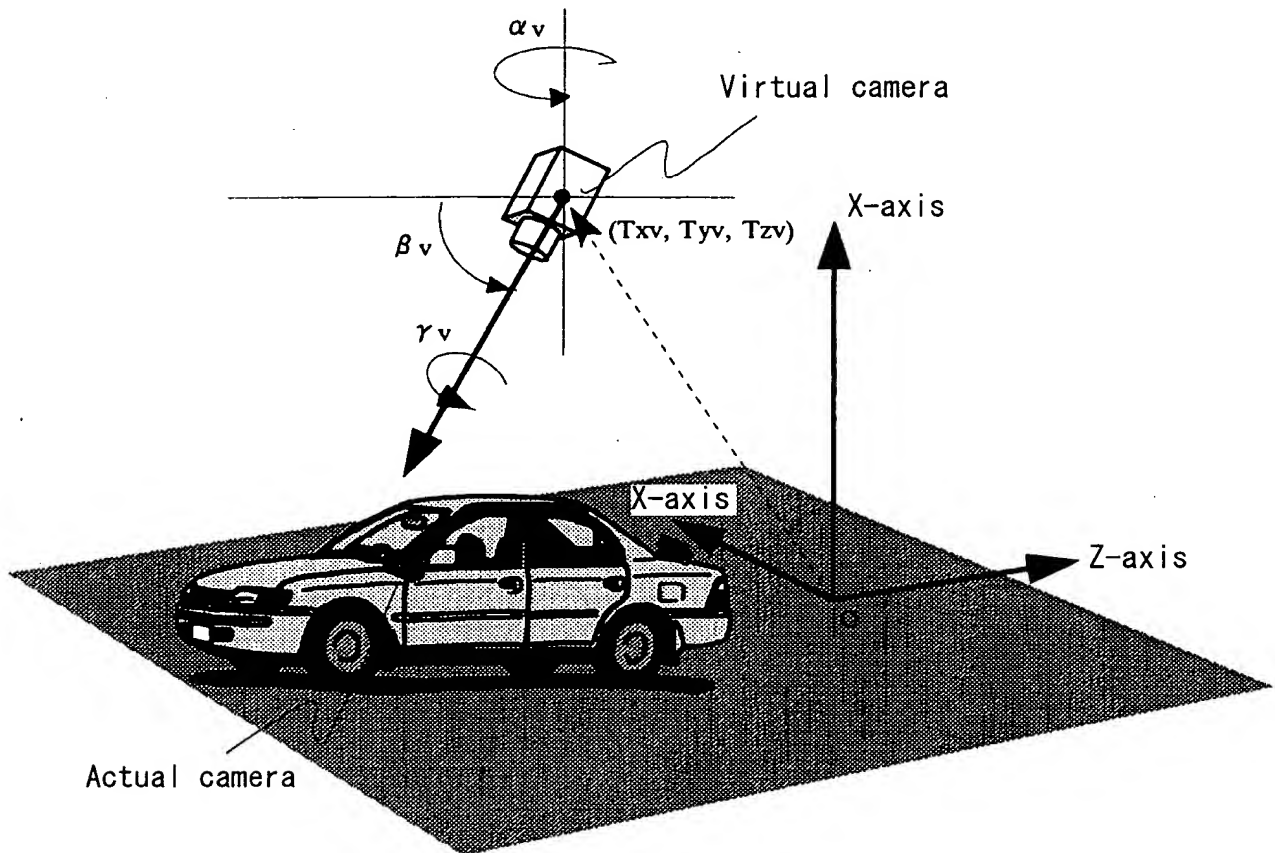


FIG. 48



47/47

FIG. 49

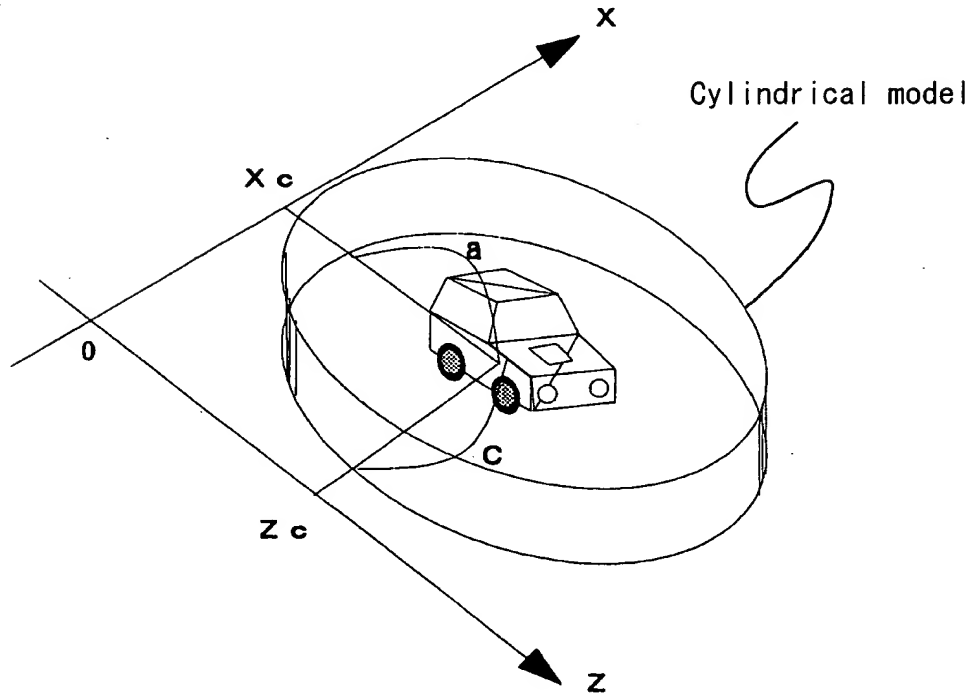


FIG. 50

